British Birds

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(with eight plates)

Notes **Reviews** **Letters**

Recent reports and news

Combined issue

Six Shillings

November
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Edited by

P. A. D. Hollom E. M. Nicholson

I. J. Ferguson-Lees Stanley Cramp

Photographic Editor: Eric Hosking

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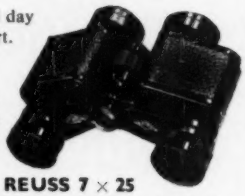

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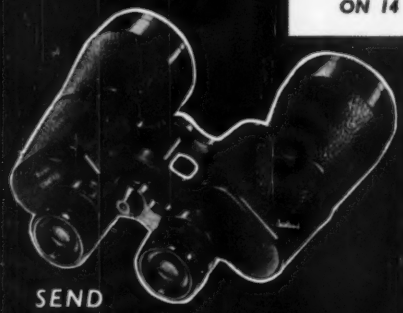

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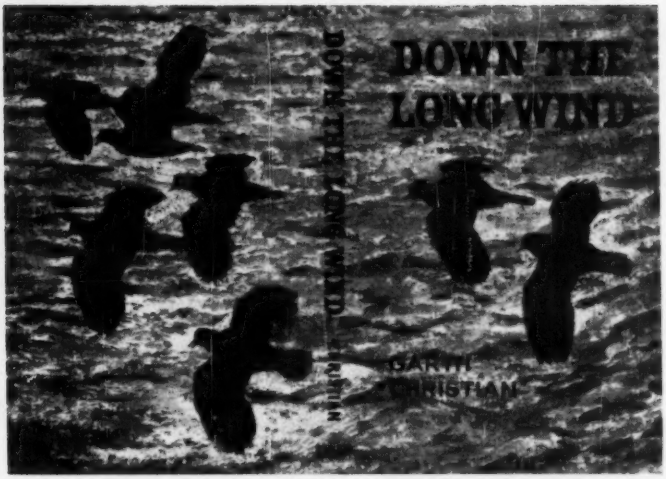

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Vol. 54 Nos. 11-12

NOVEMBER-DECEMBER 1961

The vocabulary of the Great Tit

By Terry Gompertz

(Concluded from page 394)

Q. Song: repertoire development in individuals and populations

From the most cursory listening in any given locality, it is evident that there are certain types of songs—in particular those of two-note units—which appear to be in very general use. However, in many localities one or more of the less usual song types may also be prevalent for a certain period: for example, both in Hampstead and near Totteridge (Hertfordshire/Middlesex border), three-note songs in an uneven rhythm appeared in the repertoire of many individuals in 1958. Again, during the two months I spent in the North Riding of Yorkshire in the breeding season of 1961, three-note songs predominated in the repertoires of several individuals in the Howardian Hills and the North Yorkshire dales. As an example from a very different area in the Great Tit's range, Lehtonen (1954) described the typical song phrase in an area near Helsinki as a three-syllabic *ti-ti-tuu*.

The question of whether three-note songs (and/or more elaborate variants) predominate in any area—and whether the balance between them changes over a number of seasons—offers a tempting field for co-operative amateur research. Unlike most other elements in the vocabulary, this is one which does not require the use of recording apparatus or the observation of marked individuals—though these would be necessary for a further, more refined study—since an agreed method of transcription would give a good deal of useful information.

Only a detailed study, far beyond the scope of the unaided amateur, could produce conclusive answers to some questions. For instance, how does the development of song and of the song repertoire of individual Great Tits occur? And why are certain of the more complex songs common in particular areas and not in others at any given time?

Both these questions raise the fundamental issue of the rôles played by inheritance and learning in the development of the Great Tit's song.

In the course of the present study I have accumulated a little evidence which suggests that the songs making up the repertoire of an individual Great Tit *may* be found to be divided into two categories: (a) those conforming to a pattern which is either under genetic control or acquired during the short time the bird is within hearing of its male parent (or of other Great Tits with songs closely resembling those of its male parent); and (b) those conforming to a pattern set by some of the songs of other Great Tits with which it comes into competition during its first or subsequent song seasons.

I have found that first-year males, when beginning to sing, appear to behave very much as does a human who is picking out a tune by ear. That is to say, they seem to experiment, missing a beat here or putting in a note there, until there emerges a consistent pattern which appears to satisfy them. The pattern these first-year males "have in mind" does not necessarily approximate to any of the songs other Great Tits around them are singing. Thus, the young male may be working away at a three-note song, or a two-note song in a strongly dotted or march-like rhythm, while the other males in earshot are singing two-note songs in a gigue-like rhythm. The finished product, both in tone-quality and pattern, is often similar to songs in an area about three-quarters of a mile away and not heard in the space intervening. Later in the season, however, the repertoires of the same first-year birds include, in addition to their one or two "prototype songs", at least one very similar to that of a male with whom they hold a territorial boundary.

My own hand-reared male, most of whose *calls* were typical of our local population, developed two songs—both of three notes—which were somewhat unusual in tone-quality and quite unlike anything to be heard locally. This bird came from near central London at the age of four weeks, having been reared by humans after the age of ten days or so. One of his songs was closely similar, rhythmically, to a three-note song I have noted as common in north-west London. So hard did he "work" at these two songs, apparently disregarding the eleven different ones he could have imitated from his two immediate neighbours (not to mention several others within earshot) that I was forced to the conclusion that, for this bird, song *had* to be produced in a three-note pattern. This could either have been "remembered" from the first twenty-eight days of his life when he could have heard it from his father or another male, or else he could have "had to conform" to a pattern that was genetically controlled. Since this bird died on 17th April he would still have had ample time to extend his repertoire to include approximations to his neighbours' songs. Indeed, I was

inclined to think that various *sotto voce* utterances he started from mid-February onwards foreshadowed this development.

In the case of the Chaffinch, Thorpe (1958) found that the song repertoire was built up during the first singing season of the bird's life and that "it is almost impossible for a Chaffinch to learn any new songs or indeed to modify its old ones after it has reached the age of about thirteen months". Whether or not the Great Tit differs from the Chaffinch in this respect is a most interesting question.

R. *Special vocabulary of paired birds*

I have already mentioned two elements to be heard in the vocabulary of paired birds—"pee-churring" and a Magpie-like "chatter-churr". I am in some doubt, however, as to whether these do not also appear in the vocabulary of both adult males and females who are looking for mates. There are, however, some other calls and utterances which indicate quite clearly that a male or female is paired.

1. The "duple" call. I call it this partly because the word is an onomatopoeic rendering of the call unit, and partly because the call itself—which may be anything from five to nine notes—is based on a two-note pattern in a fairly strongly marked duple time (i.e. the beat or the bar is divided into two). A spectogram of a five-note "duple" call is shown in plate 61(e). "Duple" calls may sound fairly similar to song phrases, which may lead to confusion between the two since song phrases are also used in some of the situations described below; but in any individual repertoire that I have heard the calls are not, in fact, composed of units to be heard in any of the bird's songs. I think the "duple" call is far more closely related to the *pee* note social calls, being a more elaborate and stylised version of these. The call always includes some notes of a tone-quality highly characteristic of the individual uttering it.

When the "duple" call enters—or re-enters—the vocabulary of a male, it is an indication that he is paired and keeping very close company with the female. My hand-reared male first started using "duple" calls, on hearing me around first thing in the morning, as soon as my status had changed from that of a social companion (eliciting his various *pee* note social calls) to that of a mate. He did not use them at the sight of, or disappearance of, other members of the household who continued to elicit merely the social calls.

Typically, "duple" calls are given by the male when contact between the pair has been broken or when it is renewed again. For instance, a pair may have been feeding together and one or the other flies away; wherever the male is, he soon utters the call and if the female does not either follow or return to him he flies around, apparently in search of her and calling at intervals. Or the two may have been foraging in

different places and the male returns within the territory; if he does not then find the female he starts "duple" calling.

The "duple" call, among others, is also often used by the male during the winter if he is one of those individuals who enact a certain rather pleasant little evening ceremony. This involves him in accompanying his mate to her roost, then hopping around the site and sometimes peering into it after she has gone inside.

The female starts giving her version of the call at the time when she begins to take a more than passing interest in prospecting nest sites. When nest-building starts, the female Great Tit both gathers the material and builds the nest, and the male constantly uses the "duple" call while accompanying her. When she is laying and incubating he often uses it on arrival at the nest site to feed her, and when the young are hatched it is the usual call he makes as he comes with food for the nestlings. It is not surprising, therefore, to find that it is the "duple" call which is used by both parents to rally the members of their brood after fledging. Indeed, it is then uttered at the loudest one ever hears it from the female (an increase in volume which applies to all the calls she makes at that time). Certainly, by the time they fledge, young Great Tits must know this call of their parents. It has, after all, coincided with the arrival of food for the nineteen or more days since they were hatched.

Hinde stated that he found the different broods at Wytham were "mixed broods" by the end of a week or so after fledging time. This would seem to indicate that there is little value in any particular individual quality of the "duple" call, at least as far as keeping a brood together is concerned. But I have not found mixed broods of this sort in our locality. On the contrary, when three broods (all colour-ringed) have been visiting the garden together, the youngsters concerned have all flown towards their own parents when called. The individuality of the call is so clearly apparent to the human ear that I have used it to follow the travels of a particular brood in a wood where three or four broods have been on the move.

2. Female begging notes. These are aurally indistinguishable from the juvenile begging notes. A female will use them when she has got separated from the male. I have heard them from early February onwards, but they are most common just before the start of nest-building when they can sometimes startle one into the belief that a pair has broken the rules and bred before the oaks are in leaf. The begging notes are sometimes used by the female before soliciting for courtship feeding.

3. "Zeedling." This is the utterance truly associated with courtship feeding and copulation. Used by both males and females, it has been rendered by Hinde as *zeedle-zeedle-zeedle-zee*, which is a good

verbal representation of the *glissando*, squeaky quality of the notes. According to acoustic conditions, it may be audible up to distances of twenty yards or so. I have always found the version produced by the female of any pair to be lower in pitch than that of the male. The wings are vibrated rapidly during "zeedling" and the mandibles may be only slightly open, if at all. Whether it be to give or to receive courtship feeding, or for copulation, it is the soliciting bird which starts the "zeedling" and wing-shivering display. The other, if accepting the invitation, then joins in.

I am constantly amazed at the way a female, *en route* to the nest with food for the nestlings and at the same time importuning the male for courtship feeding, can "zeedle" for some minutes with a caterpillar hanging out of her mouth. The caterpillar does not appear to impair the quality of the sound at all! Indeed, the least unsatisfactory recording I have managed to make of "zeedling"—an extremely difficult sound to record adequately—was made by holding up the microphone to a female who, caterpillar in mouth, was perched on a low branch above me as I offered cheese to her mate. Subsequently she dropped the caterpillar and the male fed her with the cheese.

Whether or not a second brood is undertaken, the female may continue to "zeedle" and wing-shiver for courtship feeding after the young of the first brood fledges. The length of time for which she continues to do so varies, no doubt, according to her readiness to breed again.

4. Nest invitation call. This is a very intense, hissing type of utterance, which I first heard and recorded from my hand-reared male. He used it when trying to entice me into "nest" holes. When in the house, these "nest" holes might be the drawers of my desk, or the slightly open medicine cupboard in the bathroom. Outside, I was tactlessly invited to enter the residents' nest boxes.

One would not normally hear this sound unless one was almost on top of a nest hole during an invitation display. But by placing a microphone directly under the entrance to a wild bird's nest box, I satisfied myself that it was a normal element in the vocabulary.

SUMMARY OF ANALYSIS

The sounds or groups of sounds uttered by the Great Tit, as I have found them to be present, or absent, in the vocabularies of juveniles and adult females and males, are shown in Table 1. As one would expect from similar studies made of other species, this analysis shows that there are two elements common to juveniles and adult females which do not occur in the adult male repertoire; these are both associated with the bird being in a dependent or subordinate position. Similarly, five of the elements in the adult male vocabulary, which are

normally absent in those of adult females and juveniles, have a strong association with the acquisition or holding of territory.

TABLE 1—ANALYSIS OF THE VOCABULARIES OF ADULT AND JUVENILE GREAT TITS (*Parus major*)

The sounds are listed in the order in which they are described in the ordinary text. N signifies normally present at appropriate seasons and E exceptionally present, while ? means possibly present and *a* absent

	Juvenile	Female paired	Female unpaired	Male paired	Male unpaired
1. Begging notes	N†	N	*a*	*a*	*a*
2. Early contact note	N	*a*	*a*	*a*	*a*
3. Random warble and "whispered quiet song"	N	N	N	N	N
4. "Intense quiet song"	N‡	*a*	*a*	N	N
5. *Tsee-ee* alarm call	N	N	N	N	N
6. Churring					
(1)	N	N	N	N	N
(2)	N	N	N	N	N
(3)	N	N	N	*a*	*a*
(4)	*a*	N	?	N	?
(5)	*a*	N	N	N	N
(6)	*a*	N	*a*	N	*a*
7. "Pits", "chits", "spicks", etc.	N	N	N	N	N
8. "Injury or distress" shriek	N	N	N	N	N
9. *Tsee, pee* and *pee* note calls	N	N	N	N	N
10. *Pee-tink* and variants	*a*	E	*a*	N	N
11. *Tink*	*a*	E	*a*	N	N
12. **Pee* notes combined with other musical and non-musical sounds	*a*	*a*	*a*	N	N
13. *Vibrant *pee* note calls	*a*	*a*	*a*	N	?
14. "Muttered threat"	*a*	*a*	*a*	N	N
15. *Song	*a*	E	*a*	N	N
16. "Duple" calls	*a*	N	*a*	N	*a*
17. "Zeedling"	*a*	N	*a*	N	*a*
18. Nest invitation	*a*	*a*	*a*	N	*a*

* definite or probable local dialects † until independent ‡ perhaps male only

VOCABULARY OF AN INDIVIDUAL MALE

Since the adult male has the greatest range of calls it may be useful to indicate the number of easily distinguishable utterances one may hear in a single individual's repertoire. Table 2 illustrates this with the repertoire of a bird I have now heard and recorded during two full years. It is by no means so extensive as that of some male Great Tits.

If to the list in Table 2 one adds the *sotto voce* "spicks", "chits" and so on, with which the bird conducts a running commentary as it goes about its business, a typical adult male's vocabulary is seen to be quite

TABLE 2—ANALYSIS OF THE REPERTOIRE OF AN INDIVIDUAL MALE GREAT TIT (*Parus major*)

Thirty-two songs and calls are summarised below

"Quiet songs"	2
Tsee alarm call	1
Varieties of "churring"	5
Tsee, *pee* and *pee*-note calls	7
Tink	1
Pee-tink variants	4
Pee-notes combined with other musical and non-musical sounds	2
Vibrant *pee*-note calls	2
"Muttered threat" phrase	1
Songs	4
"Duple" call	1
"Zeedling"	1
Nest invitation call	1

extensive. In the case of such males as the one whose repertoire of seven songs has been illustrated in plate 60, the vocabulary is even larger. This individual constantly extends his vocabulary by adoption from his neighbours and by personal improvisation. Currently, I have logged forty distinguishable utterances from him (exclusive of "spicks", "pits", etc.). It may be that this extensive repertoire has some connection with the fact that a major part of his territory lies in that part of our ground which has been designedly provided with every kind of tit attraction—thus bringing more than the normal number of visitors and keeping them on the premises for longer than is usual in the other gardens near-by.

LOCAL DIALECTS

Against three of the categories of sounds listed in Table 1 I have placed an asterisk. It is within these categories that I know (nos. 12 and 15) or suspect (no. 13) that there are local dialects. By this I mean that certain calls or songs may be heard in one quite small area of, say, half a mile radius and not in another continuous with it. The dialect frontiers coincide with territorial boundaries.

Having only had the opportunity, until now, of studying Great Tit utterances extensively in a very limited area of Britain, I can offer no evidence as to whether or not the Great Tit dialect areas resemble those of the Chaffinch. With the Chaffinch, Marler found that similar dialects recurred in different parts of the country, and he wrote (1956c): "It is as though all the towns of Yorkshire had been scattered across Britain. Each would be readily distinguished from its immediate neighbours, but could not be distinguished by ear from similar 'dialects' elsewhere . . ."

From random listening in districts other than those which I have studied intensively, it is my impression that the "dialect" position of the Great Tit may prove to be somewhat similar to that of the Chaffinch. In other words, parts of the same dialects may recur in widely separated localities.

CONCLUSION

In this paper I have attempted to relate the vocabulary of the Great Tit to the behaviour which it accompanies. I have little doubt that my analysis is oversimplified and that it will need elaboration and revision in the light of a longer and more detailed study. However, in spite of its obvious shortcomings, I hope that it may prove of some use to those who feel, as I did when a foundling Great Tit came my way four years ago, that a common bird with so varied a vocabulary sounds a challenge which is hard to ignore.

NOTE ON TECHNICAL EQUIPMENT

All recordings were made on a "Ferrograph" Model 2A/N tape recorder at a speed of 7½ inches per second. Originally one, and later three, moving coil microphones were used. These were S.T. & C. Type 4021 and the tape was Emitape 77. When three microphones were used a simple selector key was employed in order to switch from one to the other; there was no "mixing" of input. The use of three microphones greatly facilitated both the obtaining of a good signal from the same bird when it moved from one position to another and the recording or monitoring of sounds from other individuals.

The spectrograms were made on a sound-spectrograph designed by Dr. Peter Denes and constructed in the Phonetics Laboratory at University College, London.

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I have already mentioned the help of my friend Rosemary E. Jellis with regard to devising a notation and transcribing and analysing the vocabulary. Apart from this, however, she has assisted in numerous other ways; she has helped with hand-rearing and ringing, and at every stage of the preparation of this paper.

The recording necessary for the study could not have been undertaken without the unstinted help and advice of an electrical engineer; for this I am most grateful to my friend A. R. Windsor. I am also greatly indebted to Professor Fry for his kindness in making spectrograms from my recordings and for a number of most helpful discussions.

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SUMMARY

(1) The author studied the vocabulary of the Great Tit (*Parus major*) over a period of four years. Calls and songs were tape-recorded from hand-reared birds (free-flying within an aviary and house) and colour-ringed wild birds whose activities and behaviour were under constant observation. Certain calls, and the full song repertoires of two males, were submitted to spectrographic analysis.

(2) The vocabulary is analysed and a classification made which relates the various sounds and calls to the types of behaviour with which they are associated.

(3) Of the eighteen main categories of sounds made by Great Tits, five associated chiefly with territorial behaviour are normally absent from both the juvenile and female vocabularies. Also absent from the juvenile vocabulary are four utterances used only by paired birds. A random "warbling" heard from juveniles is discussed. A similar utterance to juvenile "warbling" is one of the two types of "quiet song" described; the other has been heard only from juveniles and adult males.

(4) The relationship between the *tink* note (normally exclusive to adult males) and song is discussed, as is the exceptional occurrence of "tinking" and singing in females.

(5) It is usual for males to have at least four clearly distinguishable songs; the highest number of variants transcribed or recorded from an individual was seven. The significance of variation in song is discussed, as is also the manner in which an individual's repertoire may be built up.

(6) Individuals differ in the number of variants they use within certain of the main categories of sounds listed. A male with a very average vocabulary used thirty-two distinct utterances (not including the various *sotto voce* sounds made when foraging, examining holes, etc.); one with a more extensive vocabulary has forty distinct utterances in his present repertoire.

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Further observations on foot-movements in plovers and other birds

By K. E. L. Simmons

RECENTLY I DISCUSSED some aspects of the feeding behaviour of waders and other birds with particular reference to the foot-trembling of plovers (Simmons 1961). That paper has drawn in a number of further observations which the editors have asked me to summarise. In addition, a contribution on the function of the various foot-movements has been published separately (Sparks 1961).

I am indebted to the observers whose records are given below and to Dr. Kai Curry-Lindahl, J. B. Hulscher and K. G. Spencer for help with the literature. J. B. Hulscher drew my attention to Portielje's book (1938) which contains important information on foot-tapping and foot-paddling; this supersedes certain observations in Portielje's earlier paper (1922).

Among the observations received were several cases of "rushing", "bouncing", "jumping" and so on, but these other feeding movements are beyond the scope of this present summary.

FOOT-TREMBLING BY WADERS

The notes which follow should be read in conjunction with those already published in my earlier paper:

Lapwing (*Vanellus vanellus*). Foot-trembling discussed by Portielje (1938), with a photograph of a young bird performing.

Ringed Plover (*Charadrius hiaticula*). Foot-trembling confirmed by Dr. Kai Curry-Lindahl, who has observed it many times and recorded it in *Våra Fåglar i Norden* (1947 and 1960). He never saw the behaviour in the northern subspecies (*tundrae*) on the breeding grounds in Swedish Lapland, but did so several times on the shores of lakes and marshes in the Belgian Congo where this race winters. Another record comes

from L. Baird and F. R. Horrocks who saw several Ringed Plovers foot-trembling while feeding on mud at Astley Flash, Lancashire, in 1960—"lightly and rapidly tapping the mud and feeding or at least picking after each 'tremble' " (F. R. Horrocks *in litt.* to K. G. Spencer).

Little Ringed Plover (*Ch. dubius*). Information on this species included by Portielje (1938). Robert Gillmor has also observed and sketched Little Ringed Plovers foot-trembling on a number of occasions near Reading, Berkshire.

Golden Plover (*Ch. apricarius*). Foot-trembling "repeatedly very strongly suspected" by K. G. Spencer in birds feeding on upland pastures.

Dotterel (*Ch. morinellus*). Two observed by P. Carah near Lytham, Lancashire, between 28th April and 13th May 1959 (see also *Report on Birds, Lancashire, 1959*, p. 12):

> The birds, two migrants on spring passage, were in fields of young oats on Marton Moss. While feeding, both habitually showed rapid, one-legged foot-trembling on the bare soil between the rows of seedlings.

Three-banded Plover (*Ch. tricollaris*). Observed several times in the Belgian Congo by Curry-Lindahl (1961) and in Madagascar by Milon (1951).

Black-tailed Godwit (*Limosa limosa*). Bernard King saw one foot-trembling as it stood in a shallow pool at Wyke Regis, Dorset, on 2nd October 1960:

> The bird was standing in shallow water, the greatest depth of which could not have been more than six or seven inches. Because it was slightly lame, it found difficulty in retaining its balance when probing into the bottom of the pool with its bill. As an alternative method of feeding, it constantly used its damaged foot, the toes well expanded, to tap the surface of the water quickly; it also made the same movements at varying depths below the surface. The edible life thus disturbed was either slowly picked off the surface or sought at the lower depths. But it would not appear that this practice was solely due to the injury, as the bird occasionally used its undamaged foot for the same purpose.

That this foot-trembling was in no way abnormal is also shown by Portielje's (1938) observations. He described foot-tapping in this species and compared it with the similar behaviour of the Little Ringed Plover and Lapwing. In his book there is an excellent photograph by W. F. H. Schut, which clearly shows a Black-tailed Godwit foot-trembling: one leg is quite still, while the other is blurred by its rapid movement. Clearly, then, foot-trembling is not confined to the true plovers, as was formerly believed (Portielje 1922, Verwey 1926, Simmons 1961), but this is apparently the only other wader in which it has been recorded as yet.

FOOT-TREMBLING BY A PASSERINE

Foot-trembling has recently been authoritatively confirmed in American Hermit Thrushes (*Hylocichla guttata*) by Brackbill (1960) who observed it in eight out of nine individuals that he watched closely as they foraged on lawns. In this foot-quivering (as Brackbill termed it) any bird concerned would sometimes touch only the tops of the grass blades, but at other times it was clearly the ground that it was patting, its movements on occasion being so vigorous that its whole body shook.

FOOT-PADDLING

Two-footed paddling, as I mentioned in the previous paper, occurs in many scolapacine waders, gulls, ducks, geese, swans, flamingoes and herons. To this list should be added the terns, the behaviour having been observed in, for instance, Sandwich Terns (*Sterna sandvicensis*) by Boyle (1951).

Additional references to this behaviour in gulls are contained in the books of Portielje (1938) and Kirkman (1937). Portielje described it in the Herring Gull (*Larus argentatus*), and also in the Shelduck (*Tadorna tadorna*), with photographs of both species. Kirkman likened the foot-paddling of the Black-headed Gull (*L. ridibundus*) to similar movements used in nest-shaping. The former (which he called "pool-dancing") he recorded on the sea-shore when the birds were standing in the shallows left by the receding tide, noting that the "quickstepping little 'dance' " stirred up the mud and that the gull would then peck at the surface, backing so as to "bring the disturbed area within range". He also saw one bird dance in the shallow water of the lakeside near the gullery he was studying at Twigmoor and another on a "freshly upturned sod"; both "footed it in vain". Another species seen pool-dancing by Kirkman was the Laughing Gull (*L. atricilla*): he saw a pair at the London Zoo foot-paddling in a pool, pecking at the surface as they did so, and also making the same movements on the hard gravel floor of the aviary.

To the list of gulls recorded foot-paddling, Dr. Kai Curry-Lindahl (*in litt.*) adds the Grey-hooded Gull (*L. cirrocephalus*) which he observed in the Belgian Congo.

DISCUSSION

Sparks (1961) has argued convincingly (see also Swennen and van der Baan 1959) that foot-movements by gulls and other birds on the sea-shore (1) have little, if any, reference to polychaete worms and (2) are an adaptation "to exploit the properties of intertidal muddy sand, in order to expose or incite movement in any cryptic invertebrates of the intertidal zone".

It may certainly be conceded that the various foot-movements are "designed" to function in the intertidal zone and that the evidence that birds capture earthworms inland by such movements is largely speculative (though more work is needed before the theory is finally dismissed). However, Sparks's further argument that the performance of foot-movements on grassland and other firm ground is functionless, an example of the inadaptability of bird behaviour to unusual situations, is much less convincing—though not entirely without foundation for individual cases of apparently inappropriate foot-movements are certainly due to the "inflexible nature of the behaviour". This is highlighted by such extreme cases as the Laughing Gulls that paddled on the hard gravel floor of their aviary (Kirkman 1937) and the Little Ringed Plovers and Lapwings that foot-trembled on linoleum and wooden floors (Heinroths 1928). However, it is hard to believe that the frequent foot-movements of even such shore-loving birds as the Herring Gull and Common Gull (*L. canus*) are entirely functionless inland, for these species spend much time on meadows and other firm habitats and such useless actions would surely have been eliminated at such places by habituation. Still more does this argument apply to such species as the Lapwing, the Golden Plover and, especially, the Dotterel, while the behaviour of the Hermit Thrush sheds quite another light on the problem.

I believe that the various foot-movements mentioned may well function away from the inter-tidal zone in a similar (if reduced) way—by making camouflaged or otherwise hidden invertebrates move. Much more work is needed on the feeding methods of waders and other shorebirds.

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Studies of less familiar birds

115. Bonelli's Eagle

*By Antonio Cano and E. R. Parrinder**

Photographs by Antonio Cano, I. F. Keymer and E. R. Parrinder

(Plates 66-73)

BONELLI'S EAGLE (*Hieraëtus fasciatus*) is among the easiest to identify of the nine kinds of eagle which inhabit Europe. Like the Golden Eagle (*Aquila chrysaëtos*), and unlike most of the others, it prefers barren hills and mountains, away from woods. It is considerably smaller than the Golden Eagle and has a much more active, dashing flight, stooping on its prey like a falcon. The adult is distinguishable from all other European eagles; from underneath by the contrast of the creamy white under-parts and dark wings and by the broad dark terminal band to the tail; from above by a whitish patch between the shoulders. This patch can often be picked out from a considerable distance and is sometimes visible when the bird is perched.

Immature birds are more difficult, as with all the eagles. Juveniles are dark brown above and reddish brown below with closely barred tails. Traces of the adult plumage begin to appear in the second year, when the breast becomes lighter and streaky, but the full adult plumage is apparently not assumed until the third year. Immature birds sometimes pair with adults and breed, according to Willoughby Verner (1909, *My Life among the Wild Birds in Spain*).

In Europe, Bonelli's Eagle breeds in Spain, the south of France and Italy, Greece and the larger Mediterranean islands. Outside Europe, the range extends eastwards through Turkey, Iraq and Iran to India and south-east Asia; the species is also found from Morocco to Tunisia and in many parts of Africa south of the Sahara. This eagle is not uncommon in Europe and it may seem surprising that so few photographs have been taken at the nest. One explanation is that many nesting sites are quite inaccessible for photography. In *Wild Spain* (1893), Abel Chapman and Walter Buck said that they had "only seen

*This text has been compiled by Parrinder, partly from his own observations and partly from extensive notes supplied by Cano and kindly translated from the Spanish by L. J. C. Southern.

its nest in the most stupendous rock walls—places that make one's flesh creep to survey". In those days, of course, egg-collecting and shooting were the fashion, rather than photography, and Chapman's description of his introduction to Bonelli's Eagle is horrifying to read now—"She was only forty yards away, yet the sitting shot (broadside on) produced no effect. A 'green wire cartridge, No. 1' from the left, broke a wing as she rose, and, after some little trouble, she was secured." Verner remarked that when a Bonelli's Eagle flies off the nest it makes a rapid dive, quickly followed by a short upward curve, which makes it difficult to shoot! However, he claimed to have shot one only, although he visited many nests and evidently took, or helped others to take, many eggs. The majority of the nests which he found were on open ledges on rock cliffs, always near to the top of the cliff whether it was 50 or 500 feet high. Some were relatively easy of access and some almost impossible; when he asked Admiral Farquhar, another collector, what was the nastiest place he had ever been in when eagle nesting the reply was "that Bonelli's nest we took together".

The present series of photographs was taken near Almería, in the south of Spain. In February 1958 a male Bonelli's Eagle, which had been shot by a shepherd, was received at the laboratory of the Instituto de Aclimatacíon, in Almería. It was learnt that a pair of eagles, of which the dead male was one, had nested for many years in the Barranco de Tartala, a gorge in the rocky hills a few miles north-west of the town.

The gorge is some three miles long and runs down in the direction of the town, between rugged limestone cliffs. At the lower end is a smallholding with a patch of cultivation (olives, figs, vines and prickly pears) and then a shepherd's cottage, the last habitation. Farther up, the arid limestone cliffs rise up from each side of a watercourse which, it is said, has not flowed for more than fifteen years. The vegetation is sparse and xerophitic—esparto grass, a few cultivated almond and locust trees and a sprinkling of oleander bushes in the bottom of the gorge.

In the middle of March 1958 Cano and J. A. Valverde visited an old nest in the Barranco, but found it unoccupied. A few days later they discovered the eyrie belonging to the shot male, about two miles up the gorge. It was on an open ledge 70 feet above the base of a vertical rock bastion and about 250 feet above the floor of the gorge. The site commanded a wonderful view down the gorge to the town of Almería and the sea beyond (plate 69). Although the nest was on a vertical face, a narrow ledge ran from it, rounded a corner of the bastion and continued back to the main slope of the gorge. By climbing along this ledge, Cano and Valverde were able to reach the nesting site which was on a platform in the rock face about 3 feet 6 inches wide and 6 feet

6 inches long. On this platform was a bed of dry branches covered with broom and esparto to a total depth of about 10 inches at the front and 7½ inches in the middle. Two chicks were in the nest, some seven or eight days old (plate 70a). The only food was a headless and partly eaten Ocellated Lizard (*Lacerta lepida*).

When Cano and Valverde returned a week later to erect a hide, they were told by a shepherd that the female had been seen flying with another bird which at first it fought but then appeared to accept as a new mate. This new adult did not appear to help with the feeding of the chicks. It seems, therefore, that the female continued to incubate the eggs after the death of the first male and later undertook the whole of the feeding.

There was no place on the ledge, or elsewhere, for a normal hide for photography so a wooden platform was constructed and suspended on wires from pitons driven into the rocks above (plate 68b). On 28th March, Cano added a triangular tent hide to this enterprising contraption (plate 68 inset) and two days later he returned to take plates 66 and 73. He reached the nest site at 10.40 a.m. and, on rounding the corner of the approach ledge to enter the hide, saw that the female was feeding the chicks. He was able to retreat round the corner without being seen and stayed there until the bird left, forty minutes later. She was away for eighty-five minutes, then returned with a live lizard and stayed at the nest for sixty-five minutes. One of the chicks was noticeably larger than the other and its crop was still full from the previous feed. The female first fed this chick, and then spent most of the rest of her time attending to the weaker chick, whose crop appeared empty. She showed a particular devotion towards it, tearing the lizard into small pieces and introducing them with great care into its bill (plate 66).

Six days after this, on 4th April, Cano was told by a shepherd that the nest had been destroyed furtively by some men out shooting. When he went to the nest again later, to collect the hide and platform, he found remains of the chicks on the nest.

Cano and Valverde did not visit the Barranco de Tartala in 1959. In 1960, however, M. D. England wrote to them to make arrangements for an expedition to Almería and included Bonelli's Eagle on a list of birds he would like to photograph. Cano went to the Barranco on 6th May and climbed up to the nest; he found two well-developed chicks which he judged to be about three months old (plate 70c). Four days later, Cano and Valverde accompanied England and other members of his party to the Barranco, and Cano climbed along the approach ledge to the nest. When he returned it was evident that something had gone wrong; he reported that the nest was empty and that the chicks had disappeared.

Next day, a message was received at the Instituto de Aclimatacíon that the chicks were alive and in Almería. The following morning they were taken to the Instituto where they were found to be very weak and obviously not far from death. However, they were forcibly fed with beef and revived sufficiently for Cano to take them back to the nest on the 13th. Two days later, Cano visited the eyrie and disturbed an adult feeding the chicks; their crops were full and there were lizard remains in the nest—the beef which Cano had left was untouched. The chicks had been away from the nest for at least four days, probably longer, and it is remarkable that the adults should remain around and accept them back so readily when they were returned.

On 18th May, with the help of his brother Fernando and I. F. Keymer, Cano erected the platform which had been used at the same nest in 1958. At first it was left hanging down, so as to get the adults used to it (plates 67 and 68a). Two days later, the platform was lowered and the triangular hide put on to it. As it was being fixed, an adult came in close to the eyrie, carrying a large lizard in its talons. On seeing humans, it fled and dropped the lizard which fell to the floor of the gorge with a resounding crash. When the eagle reached the other side of the valley it started to call, a loud, drawn-out whistling note, and continued to call for several minutes. Then it reappeared with the other adult and both came towards the eyrie, calling, as if intending to attack the intruders; at that moment, a Golden Eagle flew in front of them and both of the Bonelli's swerved off course and attacked it instead, following it out of sight.

Parrinder climbed along the ledge on 23rd May. Although aided by a rope belayed by Cano, he was miserably aware of the possibility of a 70-foot sheer drop followed by a 200-foot roll down the scree slopes below. Crouching inside the hide gave only a temporary feeling of security; the suspended platform sloped slightly, there was nothing to hold on to and the valley below was clearly visible through gaps in the wooden floor. But all this was forgotten when, only fifteen minutes after Cano and the others were out of sight, an adult Bonelli's Eagle arrived at the nest carrying a large green lizard (plate 71a). The lizard was torn up and fed to the young in just over twelve minutes; the eagle then flopped up to the end of the nest, about two feet from the watcher's eye, rubbed its bill against the sticks and left.

While the adult was there, the chicks kept up a thin, plaintive cheeping, but after it had left they soon quietened down and went to sleep. In the two weeks since they had been in Almería they had grown considerably and become much more feathered. They were, in fact, almost in juvenile plumage; their heads were still white, with brown flecks, and each still had a patch of down on the lower breast and another in the middle of the back.

Keymer went into the hide on 25th May (plate 71b) and Cano, to take a film, two days later. On both occasions the only food brought was lizard. Cano and Valverde carefully examined the remains scattered around the nest on all their visits to this site. Once only did they find the hindquarters of a young Rabbit (*Oryctolagus cuniculus*) and once two feathers of a Red-legged Partridge (*Alectoris rufa*) with some of Blue Rock Thrush (*Monticola solitarius*) and pigeon (*Columba* sp.). All the other remains seen, and food brought, consisted of the lizard *Lacerta lepida* (plate 72b).

This predilection for lizards seems to be unusual for Bonelli's Eagle. P. Géroudet (1947, *Les Rapaces*) gave the food as Rabbits, Hares (*Lepus europaeus*) and other small mammals and birds, especially water-birds. This diet is confirmed by both Chapman and Verner. Verner took a young Bonelli's Eagle from a Spanish eyrie and brought it back to England; he stated that its favourite food was Rabbits or rats (*Rattus* sp.). Although Bonelli's is a relatively small eagle, it is immensely strong. Abel Chapman saw one take a Ruddy Shelduck (*Casarca ferruginea*)—"this eagle was in the act of lifting the heavy duck off the water when a charge of big shot cut him down". In *Pirates and Predators* (1959), Colonel R. Meinertzhagen related seeing a Bonelli's Eagle fly off with a Houbara Bustard (*Chlamydotis undulata*), a bird of about its own weight. Chapman, in *Unexplored Spain* (1910), went so far as to state flatly that Bonelli's Eagle does not take snakes or big lizards. He tried to persuade a Spanish gamekeeper that they did, in order to distract his attention from the Rabbits and Red-legged Partridges which a particular Bonelli's was extracting from a preserved area. The unbelieving reply was "Si, Senõr, y los insectos"!

J. A. Valverde (*in litt.*) tells me that he found numerous remains of *Lacerta lepida* at a Bonelli's Eagle eyrie at Novelda, Alicante, in 1955. This eyrie was also in an extremely dry area and Valverde regards the taking of these lizards as an adaptation to semi-desert habitats; he refers to a statement of Heim de Balsac (1954, *Alauda*, 22: 3) that Golden Eagles are particularly fond of another lizard, the slightly larger *Uromastix acanthinurus*, in the very dry regions of the Sahara. There can be little doubt, however, that another factor in the Barranco de Tartala was the advent of myxomatosis, which almost wiped out the Rabbit population. There are still a few left, but their numbers are greatly reduced. On the other hand, Red-legged Partridges are abundant and they are a traditional food of Bonelli's Eagle (whose Spanish name is, indeed, "Aguila Perdicera").

Despite their harmless diet, the Barranco de Tartala eagles are clearly unpopular with the local shepherds and shooters: when Cano returned once more to the nest on 3rd June 1960, he found that it had been burnt and the young presumably destroyed, as in 1958. Valverde reports

that in 1961 the eyrie was located in a wall of rock opposite to the old nest; this site was more difficult of access, but it was nevertheless also burnt by poachers, probably before the young had hatched. The persecution of Bonelli's Eagle is nothing new—Verner remarked that "they have a great liking for the domestic fowl and owing to this and their alleged depredations on the very young kids they are much disliked by the peasants."

Notes

Little Grebes attacking Coots and domestic ducks.—Although *The Handbook* describes the Great Crested Grebe (*Podiceps cristatus*) as "sometimes aggressive towards other birds", we have been unable to trace any record of similar behaviour by Little Grebes (*P. ruficollis*). An observation which we repeatedly made while watching a pair of Little Grebes from 26th to 30th June 1961, on a small tarn near Windermere, Westmorland, may therefore be of interest. Their nest (with eggs) was in a completely open site among pondweed, and near the middle of the lake which is about three acres in extent. Three Coots (*Fulica atra*) were also established on the water (two of these had had a nest but a predator had taken their eggs). What happened was that one or the other of the Little Grebes would dive when five to ten yards from any of the Coots and, after a second or two, the Coot concerned would suddenly erupt from the water and scutter rapidly away with loud squawks. Once, when the off-duty grebe was returning to the nest, a couple of white domestic ducks (*Anas* sp.), which had been dabbling near-by for about two hours, reacted in a similarly violent way after the grebe dived near them. On every occasion the sudden departure of the Coot (or duck) was instantly followed by the surfacing of the Little Grebe exactly where the other bird had been. There is no doubt in our minds that the grebes were attacking underwater. All the incidents involving Coots took place at least fifty yards from the grebes' nest, but the ducks were attacked when only about ten yards away. J. B. and S. BOTTOMLEY

Early sexual maturity in Mallard.—Four abandoned duckling Mallard (*Anas platyrhynchos*) were rescued in the grounds of the Wildfowl Trust at Slimbridge, Gloucestershire, in November 1960. The first was found on the 7th and weighed 33 gm., the second was brought in on the 11th and scaled 43 gm., and the last two, on the 21st, were 51 and 53 gm. Newly hatched Mallard at Slimbridge commonly weigh about 35 gm., though there is considerable variation among individuals and between clutches. All the ducklings came from the same pen and it is possible that they formed part of a single brood.

There were two males and two females. They were hand-reared indoors and on 6th February were put into a metabolism cage for digestibility trials with various foods. The floor of this cage was of small gauge weld-mesh, nine foot square, and water and food were available only in troughs. With the exception of short periods in February and March, the ducks were caged until the summer.

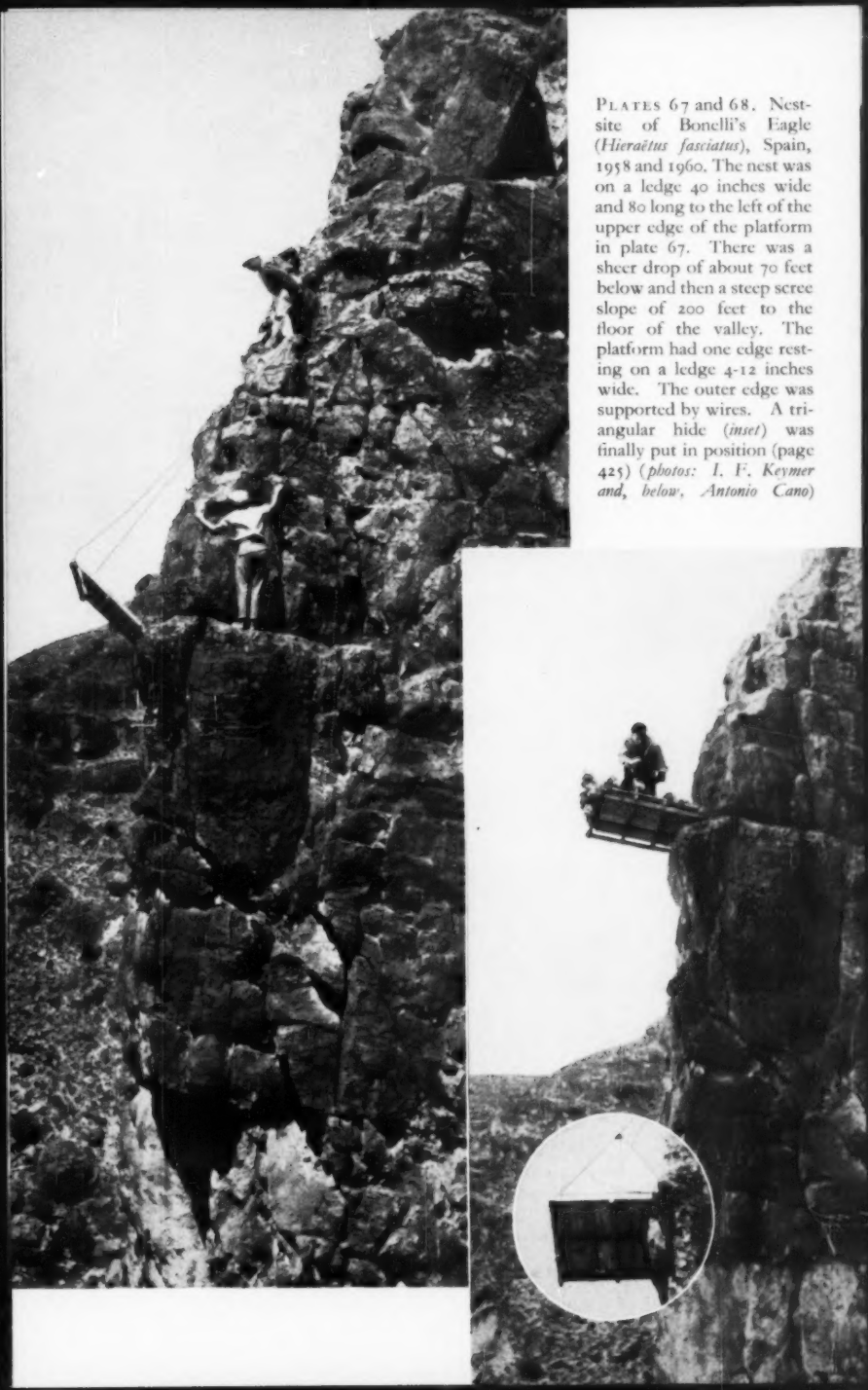
On 11th June 1961, when they were seven months old, an egg was found in the cage and on the following day two more; the birds continued to lay at this rate until 2nd July, by which time twenty-six eggs had been produced. All were placed in an incubator and later examined for fertility. Thirteen showed signs of development. Probably these came from both the females as, in one case, two eggs of rather different shape and laid on the same day were fertile. Obviously the males were able to "tread" successfully in the unusual circumstances, although a 50% fertility rate is low.

It is generally assumed that a wild duck will not normally reproduce until about a year after hatching, although certain domestic breeds are expected to lay eggs at only four to four and a half months old. However, Hugh Boyd (*Brit. Birds*, 50: 302-303) recorded the apparent sexual maturity of a female Mallard in October, at an age of five months, under "wild" conditions. He suggested that late autumn broods, quite common in this species, might be the offspring of juveniles, rather than of adults that had bred or attempted to breed earlier. The now established fact that these late ducklings, of both sexes, are capable of reproduction in the following spring suggests that, in certain circumstances, Mallard may produce two generations in one year. JANET KEAR

In her last paragraph Dr. Kear is contrasting domestic and wild ducks, but Mr. Derek Goodwin points out that other families of birds breed in the wild when much less than a year old. In Europe one assumes that birds do not breed until at least the following spring because conditions usually prevent the rearing of young in winter, but some species in other parts of the world—for example, Zebra Finches (*Taeniopygia castanotis*) in Australia—are known to breed when only about two months old if the conditions are favourable. Mr. Goodwin adds that he does not have much doubt that many tropical species, at least estrildines and pigeons, will breed in the wild when they are less than a year old.—EDS.]

Unusual behaviour of Marsh Harriers.—On reading Mr. Bernard King's recent note on unusual feeding behaviour of Marsh Harriers (*Circus aeruginosus*) (*Brit. Birds*, 54: 161), I was interested to see how similar his observations were to some which I also made at Minsmere,

PLATE 66. Adult female Bonelli's Eagle (*Hieraëtus fasciatus*) feeding young 23-24 days old, Spain, March 1958. Note the dark end to the tail and the whitish area on the back. The nearer chick was weaker and was always fed after the other, but for a longer time and with great care (pages 422-427) (*photo: Antonio Cano*)



PLATES 67 and 68. Nest-site of Bonelli's Eagle (*Hieraëtus fasciatus*), Spain, 1958 and 1960. The nest was on a ledge 40 inches wide and 80 long to the left of the upper edge of the platform in plate 67. There was a sheer drop of about 70 feet below and then a steep scree slope of 200 feet to the floor of the valley. The platform had one edge resting on a ledge 4-12 inches wide. The outer edge was supported by wires. A triangular hide (*inset*) was finally put in position (page 425) (*photos: I. F. Keymer and, below, Antonio Cano*)

PLATE 69 (*right*). Habitat of Bonelli's Eagle (*Hieraëtus fasciatus*), Spain, 1958 and 1960. The nest in these photographs was 965 feet above sea level and faced south. This is the view from the nest down the valley to Almeria, with the sea in the distance. It is a terrain of rugged limestone with scant vegetation, few mammals, many lizards and snakes, and a limited variety of birds. Esparto is widespread, but most of the vegetation is growing on a dry river bed. The bushes in the foreground are oleanders; beyond can be seen various almonds, locust trees and prickly pears (*photo: I. F. Keymer*)

PLATE 70 (*below*). Young Bonelli's Eagles (*Hieraëtus fasciatus*), Spain, 1958 and 1960. Their ages in the three photos are 7-8 days, 23-24 days and 3 months. At 7-8 days they were nearly six inches long and their down was dirty white with a slight smokiness round the eye and on the crown, back and wings; their beaks were black shading to greenish-yellow at the base, with the cutting edges and cere yellow like their feet. By three months the brown feathers were coming through; the chicks in this third photograph are the 1960 ones which were later stolen but replaced (page 425) (*photos: Antonio Cano*)

PLATE 71. Bonelli's Eagles (*Hieraëtus fasciatus*), Spain, May 1960. Above, ten days after the young were replaced (page 425) (*photo: E. R. Parrinder*). Below, two days later, the chicks now much more fully feathered than in plate 70c taken 19 days earlier; they are watching the other parent overhead (*photo: I. F. Keymer*)

PLATE 72. Above, a striking study of a young Bonelli's Eagle (*Hieraëtus fasciatus*) five months old, Spain. Below, remains of Ocellated Lizards (*Lacerta lepida*) in the nest: a tail and two skulls and one still alive despite large side wounds; these eagles fed very largely on lizards (page 426) (*photos: Antonio Cano*)

PLATE 73. Adult female Bonelli's Eagle (*Hieraëtus fasciatus*), Spain, March 1958. Note the contrast between the darkish brown upper-parts, paler on the nape, and the silky white under-parts which are finely streaked. Made of dry branches, lined with broom and esparto, this nest was 7-10 inches deep (*photo: Antonio Cano*)

Suffolk. On 14th July 1960, in the late afternoon, there were five Marsh Harriers close together in a rough grass field at the edge of the marsh. Two of them, a female and a juvenile, were perched on a small bush throughout the half-hour I was watching, while the other three, all juveniles, remained on the ground. From time to time these three flapped their wings vigorously and made short bounds which carried them a foot or so into the air and a short distance forward; on landing they occasionally performed another hop and came down with wings spread in a rather ungainly fashion. At first I thought that the actions were wing exercises, but after a time I became convinced that the birds were trying to hop on to something which was present in the grass, though it should be added that they did not appear to pick anything up from the ground. The actions and the bounding quality of each hop called to mind the hunting technique used by Foxes (*Vulpes vulpes*) trying to catch small rodents or large insects.

T. M. CLEGG

Coots eating acorns.—The recent references to Black-headed Gulls (*Larus ridibundus*) eating acorns (*Brit. Birds*, 54: 118, 130-131) have prompted me to record some observations I made on a group of Coots (*Fulica atra*) on Windermere, Westmorland, on 18th February 1956. Flocks of several hundred of these birds regularly winter there from October to March, and about ten were diving in Parsonage Bay that day. At this point a number of oak trees overhang the lake and there were many broken acorns, split by the weather, lying in one to three feet of water just off-shore. The Coots were ten or twenty yards from me, but through binoculars I could see that they were picking up and swallowing these split acorns.

ALAN F. AIREY

Apparent distraction display of Common Gull.—On 16th August 1961, while in Finnmark, Norway, with the University College of Swansea Øksfjord Expedition, I witnessed what seemed to be a distraction display by one of a pair of Common Gulls (*Larus canus*) at Sandland. This pair apparently had young hidden in the vegetation on the edge of a shallow lake about two hundred yards from the rest of the colony. The displaying bird glided downwind for about fifty yards at a height of less than a foot above the water, passing close to me and occasionally allowing its trailing feet to touch the water. At the end of the glide, it landed breast first on the water, bouncing several times before swimming jerkily away with its head held well forward near the water. It repeated this display noiselessly several times while its mate circled calling.

M. P. HARRIS

Gulls and Arctic Skuas feeding on berries.—During August 1961, when in Finnmark, Norway, with the University College of Swansea Øksfjord Expedition, I visited a mixed colony of breeding Common Gulls (*Larus canus*), Lesser Black-backed Gulls (*L. fuscus*) and Arctic Skuas (*Stercorarius parasiticus*) on the island of Loppa. Adults and young of all three species were feeding on the whinberries (*Vaccinium*) and crowberries (*Empetrum*) which were growing profusely in the area. The gulls were picking the berries with the tips of their bills, but the Arctic Skuas were gripping them with their heads tilted and then twisting them off the stalks. The adult skuas also often fed their free-flying young with small unidentified particles which I thought were these berries. M. P. HARRIS

Kingfisher hovering and taking insects in the air.—On 16th July 1961, at Eye Brook Reservoir, Leicestershire, E. Pell and I watched a Kingfisher (*Alcedo atthis*) hovering over a small area of long grass, rushes and sedge. From this hovering position, it was hawking flying insects after the manner of a Spotted Flycatcher (*Muscicapa striata*). *The Handbook* refers to hovering over water and to the taking of aquatic insects, but we can find no mention of Kingfishers feeding on flying insects in this way. N. L. HODSON

Passerines feeding on sandhoppers.—Bryan L. Sage's recent note (*Brit. Birds*, 54: 246-247) reminds me that I have occasionally seen Passerine species taking sandhoppers (*Talitrus locustra*) from the tide-wrack in the bays of the Gower Peninsula, Glamorgan, always in June, July or August. Jackdaws (*Corvus monedula*) are the birds most often involved and I have watched a group of as many as forty feeding in this way. I have also noted small parties of Rooks (*C. frugilegus*) a few times, and a Raven (*C. corax*) and a Rock Pipit (*Anthus spinoletta*) once each. On another occasion, a Pied Wagtail (*Motacilla alba*) caught a sandhopper, but immediately dropped it. H. DICKINSON

Swallows associating with Starlings to feed.—At about 5.0 p.m. on 21st August 1961, near Belmullet, Co. Mayo, a flock of 80-100 Starlings (*Sturnus vulgaris*) flew past me, with about 40 Swallows (*Hirundo rustica*) in close attendance. A few minutes later I came across the Starlings feeding in the grass, and saw that all the Swallows were flying very close to the ground, directly over them. For the next fifteen minutes I watched the progress of the Starlings and they were always followed closely by the Swallows, even when they flew a short distance. What were presumably the same birds were still behaving in this way when I passed the place again at 5.55 p.m. The day was stormy, with strong westerly winds, and I concluded that the Swallows,

finding food scarce, were feeding on insects disturbed from the grass by the Starlings.

This seems to be parallel to H. G. Alexander's observation of a Swallow which persistently followed him to catch the insects he disturbed from the ground (*Brit. Birds,* 52: 164).

JOHN R. WHITELEGG

Preening in flight.—In Essex I have often observed Sand Martins (*Riparia riparia*) preening in the air in a similar manner to that portrayed by D. I. M. Wallace for Swifts (*Apus apus*) (*Brit. Birds,* 54: 323-324). Furthermore, when newly ringed Sand Martins are released, they usually peck at the ring for a second or two on laterally extended wings. Some go into a shallow dive as they attack the ring and so do not lose their stability, but others hold their wings obliquely downwards until they pitch backwards and finally stall.

JOHN H. SPARKS

Aerobatic behaviour of Rooks in a thermal.—On 1st July 1961, at Marham, Norfolk, I observed a flock of Rooks (*Corvus frugilegus*) soaring in a column of warm air rising over flat grassland. The thermal was a strong one and the birds ascended very quickly. At length, when the highest birds were about 200 feet up, I saw one Rook at the top of the flock turn completely over and descend vigorously in a spin. It was rolling through 360 degrees and continued to do so until only a few feet from the ground. Others then began to do the same, all starting from the culmination of the thermal and spinning downwards. As an aviator I have some experience of thermal flying and I have also heard of glider pilots getting out of a vigorous cumulonimbus cloud by side-slipping and spinning. These birds certainly knew their technique.

DAVID WRIGHT

Sex counts of Blackbirds on passage.—As the summaries by L. S. V. and U. M. Venables (*Ibis,* 94: 636-653; *Brit. Birds,* 54: 120-121) and J. H. Phillips (*Brit. Birds,* 54: 277-282) have indicated a preponderance of male Blackbirds (*Turdus merula*) in wintering areas in Britain, I should like to record the following observations made on spring passage.

In the early morning of 4th April 1960, a heavy fall of thrushes and Starlings (*Sturnus vulgaris*) occurred on the Calf of Man, an island of about one square mile lying to the south-west of the Isle of Man. The last birds to arrive, just after dawn, were seen to come from the south-west; it thus seems probable that the migrants had wintered in Ireland and were returning to the Continent. At least 2,000 Blackbirds were estimated on 4th April and many stayed until the 7th. A

number were trapped with mist-nets on the 4th and 6th, and there have been subsequent recoveries from breeding areas in Denmark and southern Scandinavia. Of 139 Blackbirds caught on the 4th, only 41 (29.5%) were males; of 66 caught on the 6th, 19 (28.8%) were males. Nets were scattered widely over the island, so the samples are good indications of the percentage composition of the migrant flock. P. R. EVANS

[We have received a number of notes on sex ratios of wintering Blackbirds as a result of the summaries referred to in the first paragraph above. Most of these do not merit publication on their own, however, because they are not statistically adequate to extend the conclusions put forward by Mr. and Mrs. Venables and Mr. Phillips; some of them also lump together the observations of different years and months. It is clear that there is a most interesting field for research by ringers here, but it needs to be carried out on a sufficiently large scale to produce satisfactory results. We are publishing the present note by Dr. Evans because it draws attention to a separate subject—the differential timing of migration in the two sexes. Here also there is scope for detailed analysis of the data from the bird observatories' files.—EDS.]

Robin building second nest before departure of first brood.—In May 1956 a pair of Robins (*Erithacus rubecula*) built a nest in an old watering-can hanging on the outside of a shed in my garden at Tadworth, Surrey. The young left this nest on or about 14th June, on which day the first egg was laid in a second nest that had been started inside the shed about the 7th. The nests were only two feet apart and obviously belonged to the same pair, as there were no other Robins holding territory in that particular part of the garden. The construction of a second nest before the fledging of the first brood must surely be very exceptional. HOWARD BENTHAM

[This is an unusually striking and well documented case of something which probably happens more frequently than Mr. Bentham suspects. We referred this note to Dr. David Lack, as he only touched on the subject in his *The Life of the Robin* (1943, pp. 92-93), and he did not know of any other record of a second nest being begun as much as a week before the departure of the first brood.—EDS.]

Notes on the incubation of the Grey Wagtail.—In a contribution to *Festschrift von Erwin Stresemann* (Heidelberg, 1949) entitled "The African Mountain Wagtail *Motacilla clara* at the nest", R. E. Moreau drew attention to the lack of comparable studies of the closely related Grey Wagtail (*M. cinerea*). Since this lack has still not been remedied,

I think I should put on record some observations which I made near Malmesbury, Wiltshire, in 1957. The site is a moat surrounding a house on an island of about an acre and a quarter; it is in the midst of farmland and distant a quarter of a mile from the Bristol Avon. The birds are present throughout the year, except in severe weather when the moat is frozen.

In 1957, Grey Wagtails were about at the beginning of March and on the 10th three were seen chasing together, presumably in some form of territorial contest. On 4th April, I found the nest in the dry stone wall of the moat, about two feet above the water (and a foot or so below ground level), on the side facing south-west. The water here is always still and not affected by the sluice which there is in the south-east corner. The nest appeared to be complete, but there were no eggs. The first egg was probably laid on the 7th and incubation began with the completion of the clutch of five on the 11th. On the afternoon of the 22nd three of the eggs were taken, possibly by a Grass Snake (*Natrix natrix*), and the birds deserted. By then, however, I had made detailed observations on nine of the twelve days of incubation.

Both parents took part in incubation, turn and turn about, and the hen roosted on the nest. The cock was recorded on the eggs for periods of from 20 to 68 minutes at a stretch, the hen for periods of from 20 to 90 minutes. The longest time for which the eggs were left uncovered was 18 minutes, but this was exceptional and usually one bird relieved the other at the nest, or within a minute or two. According to *The Handbook*, incubation is "performed by hen as a rule, but male also takes some part" and, unless the behaviour of my pair was atypical, this seems to me to need some modification. In *M. clara*, according to Moreau, "the share of the male (in incubation) is considerable". He also found that "it was unusual for the eggs to be left uncovered for longer than a quarter of an hour". My observations on the Grey Wagtail suggest that its behaviour in these respects is similar.

E. J. M. BUXTON

House Sparrows breeding in thrushes' nests.—In a small rural area at Porton, near Salisbury, Wiltshire, the House Sparrow (*Passer domesticus*) is the most numerous breeding species. Most nests are in the roofs of farm buildings, in trees (15-20 feet above the ground), in thick hawthorn hedges (often as little as five feet from the ground), or in ivy, but in 1961 we also had three cases of House Sparrows breeding in the nests of other birds.

The first was in the nest of a Song Thrush (*Turdus philomelos*). This was about three feet from the ground in an isolated hawthorn bush and a brood of four Song Thrushes had left it on 3rd May. On the

18th we flushed a female House Sparrow from the nest, which had been roofed and lined with feathers. There were four eggs, one of which did not hatch, and three young left the nest by 13th June. The same or another pair of House Sparrows were often at the nest in the next four weeks and on 11th July it was found that the original entrance had been closed and a new one made. There were three eggs again, but these did not hatch and the nest was later abandoned.

The other two instances involved nests of Blackbirds (*T. merula*). One pair of Blackbirds had built during April, again in an isolated hawthorn bush and about four feet from the ground, but had laid no eggs. House Sparrows were often at this nest in May and by the 18th a very thin dome had been built. This was gradually reinforced, until by 6th July the nest was well-roofed and lined with feathers. There were three eggs on the 10th and all hatched. The last nest was in a Swedish beam at a height of about 12 feet and the Blackbirds had three eggs in it on 6th June. On the 13th the nest was empty, but a pair of House Sparrows were in occupation and were regularly present thereafter. On 12th July the nest contained three young House Sparrows and an unhatched egg, but it was blown down in a gale that night. This nest had been lined with feathers, but there was no roof.

A. A. DUNTHORN and F. P. ERRINGTON

Reviews

Bird-Song. By W. H. Thorpe. (Cambridge Monographs in Experimental Biology no. 12). Cambridge University Press, London, 1961. xii+143 pages; text-figures. 20s.

For many years ornithologists have had painstakingly to try to convert bird songs and calls into mnemonic jingles, rhymes, words and phrases derived from human speech. These have all necessarily been highly subjective and, although they possess a certain value for their authors, they are unsatisfactory as descriptions for other observers. Many attempts have also been made to show the characteristics of bird song by ordinary musical notation, but, although this can be used where the songs have both a simple pattern and a more or less pure intonation, it is an unsuitable technique for high-pitched sounds of fluctuating frequencies and for the rhythms of many bird noises. The growth of tape recording and the invention of the sound spectrograph, which by a series of filters analyses bird-utterances and produces a delicately shaded graphic representation of frequency, loudness and duration, have provided two incomparable tools for the research worker.

Dr. Thorpe, with the assistance of Dr. Peter Marler who worked at Cambridge with him from 1952 to 1957, has made a fascinating and

rewarding use of the sound spectrograph to examine some of the many problems associated with bird songs and calls. Not only has he made many recordings himself of birds under experimental conditions, but he has been able to draw upon the large reservoir of recorded material in the B.B.C.'s library of recordings as well as from the large collection at Cornell University in the United States.

This book is the logical successor to a number of stimulating scientific papers that Dr. Thorpe has produced in recent years. It examines in considerable detail and with much clarity of exposition the supposed differences between animal language and human speech and it is interesting to note on page 11 that "human speech is unique only in the way in which it combines attributes which in themselves are not peculiar to man but are found also in more than one group of animals". There is a very full discussion on the function of call-notes; it would seem that among those Passerines whose vocabularies have been well studied the number of basic call-notes averages about fifteen, which suggests that this is the number of main items of information to be conveyed. Incidentally, I have found that among mammals the Badger has thirteen basic calls used in a similar way to those of some of the Passerines.

Much of the rest of this instructive book is devoted to the characteristics of song, as well as to the internal and external factors which control its seasonal and daily periodicity. Song also tends to be given in the absence of the female; even to the bachelor ornithologist it may come as a surprise to read that a Red-eyed Vireo uttered nearly 22,200 songs in the course of a single day! Sub-song is also discussed and there are chapters on the development of song in the individual, on specific and subspecific differences in vocalisations and on the way in which birds hear and produce sounds themselves. The book is liberally illustrated with sound spectrograms and graphs which make an exciting visual complement to the text; it is to be hoped that it will induce more ornithologists to study this somewhat neglected aspect of bird behaviour. ERIC SIMMS

The Birds of the British Isles. By David A. Bannerman. Illustrated by George E. Lodge. Vols. IX and X. Oliver & Boyd, Edinburgh and London, 1960 and 1961. 410 and 330 pages; 26 and 23 colour plates. 63s. each.

Such is the spaciousness of Dr. Bannerman's plan that in these two volumes he covers only some sixty waders at an average of a dozen pages apiece. This enables him to include many special contributions from other authors, notably in the case of American species. The life histories of a dozen of these have been written by Dr. George Miksch Sutton whose expressed conviction that the Eskimo Curlew is not

extinct has been given welcome support in a recent issue of *The Auk* (78: 259-260). There some apparently reliable sight identifications on spring migration in Texas in both 1959 and 1960 were described in detail. However, it would still be premature to criticise Dr. Sutton's seemingly inconsistent use of the past tense in describing the migration and breeding habits of this species.

In addition to the godwits, curlews and snipe, Volume IX deals with the phalaropes and Turnstone, the genus *Calidris* and the Sanderling, Ruff, Stilt Sandpiper and Buff-breasted Sandpiper. It also includes an index to English names in the first nine volumes; this has been produced by Lord Alanbrooke, but it is to be hoped that he was not held responsible for the proof-reading which has let through such odd entries as "Sparrow, hawk" and "Vireu, red-eyed". Something has also gone wrong in the full and interesting account of the European decline of the Great Snipe on page 114, where a status note presumably meant to refer to Estonia is given under Finland in contradiction to what has just been written regarding that country. We must take issue with the author over his strictures on our predecessor H. F. Witherby's use of the term "southern England" to cover the East Anglian breeding locality of the Black-tailed Godwit in 1937. Under "South Country" the Oxford Dictionary says "of England (south of the Wash)" and it is gratuitous of Dr. Bannerman to suggest that in following this definition Witherby "gratuitously led readers . . . astray".

In his preface to volume IX Dr. Bannerman raises what is perhaps the most difficult and delicate problem to have troubled British ornithologists this century—the right treatment of the "Hastings rarities" recorded in its first two decades. He gives his reasons for concluding that these records should stand, and expresses concern at the prospect of the matter being reopened. However, the editors of *British Birds* decided some time ago that this unwelcome task must be faced, and only the necessity for including fresh evidence has prevented earlier publication of their analysis, which is now being revised for the press. They recognise, and are sorry for, the inconvenience caused to authors such as Dr. Bannerman, but they could not fairly anticipate the comprehensive survey which the subject required. Meanwhile, it is interesting to note that, despite his declared line, Dr. Bannerman himself does not disguise his dissatisfaction with such records as those of the six Slender-billed Curlews recorded near Hastings in 1910 and 1914, of which he writes: "We are not told who actually procured these specimens or in whose possession they were when examined in the flesh by competent naturalists, nor by whom they were mounted!"

Volume X covers the genera *Limicola, Actitis, Tringa, Totanus* and *Heteroscelus*, and the plovers, Black-winged Stilt, Avocet and Oyster-

catcher. Dr. Bannerman follows the A.O.U. Check-List (1957) in retaining the genus *Eupoda* for the Caspian Plover, instead of including it in *Charadrius*, and in maintaining the specific distinctness of the Spotted and Common Sandpipers, for which he still keeps the genus *Actitis*. In a book so informative about habits in African winter-quarters, it is surprising that the fondness of Common Sandpipers for resting on Hippopotamuses should not be mentioned. Another unexpected omission is the recent work of scientists from the Ministry of Agriculture, Fisheries and Food on the feeding habits of the Oystercatcher. While the frequent reliance on other contributors to deal wholly or partly with particular species greatly strengthens the work in the main, it sometimes produces a badly unbalanced account and one such contribution (contrary to Dr. Bannerman's own admirable standards) appears to draw heavily on K. G. Spencer's *The Lapwing in Britain* with scant acknowledgement.

It would not be difficult to add further criticisms, but when all is said, as volume succeeds volume, the scale and, indeed, magnificence of Dr. Bannerman's achievement reduces to relative insignificance the points on which he can justly be faulted, once it is accepted that such a work should be of this particular character. Basically, it may be felt, the conception which Dr. Bannerman has adopted is not contemporary, but, if it lacks certain features which may leave some readers feeling deprived, it offers in rich and generous measure others which modern works are very apt to cut out. George Lodge's plates equally do not exhale the spirit of the 1960's. Yet how gloriously they reflect the peculiar virtues of the great days of British bird portraiture. How much pleasure they will give in evoking so many birds just as bird-watchers hope to see them and, when fortune favours, do indeed see them. Let us, therefore, after fulfilling our critical task, conclude by raising a suitably appreciative cheer as Dr. Bannerman's stately caravan rolls by.

F. M. NICHOLSON

Sea-Birds. By Charles Vaucher. Translated by James Hogarth. Oliver & Boyd, Edinburgh and London, 1960. 254 pages; 252 photographs, including 15 colour. £5 5s.

Familiarity may sometimes lead us to forget that the birds of our own sea cliffs provide a spectacle as exciting as those of any marsh or delta abroad, and in settings which are scenically far superior. Charles Vaucher, a Swiss ornithologist, has approached the nesting birds of the north European cliffs and dunes with something of the delighted wonder of the British photographer first seeing the Flamingoes of the Camargue, and the result is a rich and attractive pictoral record. His studies cover, very generously in most cases, the Fulmar, Cormorant, Shag, Gannet and Arctic Skua, the gulls, terns and auks, the

Shelduck and Eider, and, briefly, three waders, the Oystercatcher, Ringed Plover and Turnstone. Many of these have often been photographed before, but his individual and romantic approach, with a free use of large close-ups and many superb flight shots, evokes most successfully the thrill of the great sea-bird colonies. Many of his photographs were taken in Britain, on the Farnes and the Bass Rock and at Tentsmuir; others in the Baltic and Britanny. In some ways, it would have been more rewarding to the British reader if he had given us more pictures of the strange, glacier-smoothed islands of the Finnish archipelago, and of such birds as the Caspian Tern and Little Gull, which are less well known to us.

In the accompanying text, he describes the various species in their nesting places, and his experiences in photographing them. His prose is alive and colourful; he brings the scene so vividly before us that it is perhaps ungrateful to complain that he tells us little that is new. There is also an appendix of descriptive summaries, giving the plumage, measurements, breeding data and distribution of each species in a convenient but rather condensed form. In sum, this is a glorious, if expensive, picture book, which will bring back powerfully in the winter evenings, the sights, and almost the sounds, of the teeming sea-bird colonies of the northern oceans. STANLEY CRAMP

The following publications were received in 1961, in addition to those reviewed:

Birds of Eastern and North Eastern Africa. By C. W. Mackworth-Praed and C. H. B. Grant. Longmans, London, 1960. Second edition. 50s.

Blind Jack. By Stéphanie Roden Ryder. Harrap, London, 1960. 12s. 6d.

Cage Birds. By R. M. Lockley. Pan Books, London, 1961. 2s. 6d.

Iceland Summer. By G. M. Sutton. University of Oklahoma Press, Norman, 1961. 47s. 6d.

Bird Doctor. By Katherine Tottenham. Nelson, London and Edinburgh, 1961. 15s.

The Book of Bird Life. By Arthur A. Allen. Van Nostrand, Princeton, U.S.A., 1961. Second edition. 56s. 6d.

Sex Ratios and Age Ratios in North American Ducks. By Frank C. Bellrose, Thomas G. Scott, Arthur S. Hawkins and Jessop B. Low. Illinois Natural History Survey Bulletin, Volume 27, Article 6, 1961. $1.00.

Binoculars and Telescopes for Field Work. By J. R. Hebditch. British Trust for Ornithology, Oxford, 1961. Fourth edition, revised with new title. 1s. 6d.

The Birds of the Lonely Lake. By A. Windsor-Richards. Illustrated by D. J. Watkins-Pitchford. Ernest Benn, London, 1961. 11s. 6d.

The Birds of British Somaliland and the Gulf of Aden. By Sir Geoffrey Archer, K.C.M.G., and Eva M. Godman. Volumes 3 and 4. Oliver and Boyd, Edinburgh and London, 1961. £9 9s. the set of two volumes.

Letters

White-throated Sparrows in captivity

Sirs,—I read with interest Mr. J. T. R. Sharrock's account of a White-throated Sparrow (*Zonotrichia albicollis*) at Needs Oar Point, near Beaulieu, Hampshire, in May 1961 (*Brit. Birds,* 54: 366-367). I feel you should know, however, that three of these birds escaped from an aviary in the vicinity of Datchet, Buckinghamshire, in late September 1960. One was in immature plumage; the other two were adults, one of them a known female. All were colour-ringed with plastic rings, in black, green and red respectively. A fourth bird was killed by a cat.

G. T. NELSON

[When Mr. Sharrock's observation was considered by the Rarity Records Committee, enquiries were made about White-throated Sparrows in captivity in Britain and these seemed to show that none had been imported in recent years. The birds mentioned by Mr. Nelson were known, but, owing to a misunderstanding, it was thought that they were the closely related White-crowned Sparrows (*Z. leucophrys*). The Hampshire bird was not ringed, however, and in any case it seems unlikely to have had any connection with the ones from Datchet in view of the letter which follows.—EDS.]

White-throated Sparrow and American Robin crossing Atlantic on board ship

Sirs,—I sailed from New York in R.M.S. *Queen Elizabeth* on 26th April 1961. The following afternoon, when we were about 700 miles out and slightly north of east from New York, I observed a White-throated Sparrow (*Zonotrichia albicollis*) below the bridge. Subsequently I got so close that I was almost able to get it in my hand. It roosted in the garden lounge and was fed by various stewards, staying with us at least until we were off the Isles of Scilly on 30th April. I last saw it about noon that day, when it was with an American Robin (*Turdus migratorius*) which had been on board for about the same period of time. I was very busy towards the end of the voyage, however, and so could easily have overlooked it on 1st May. We were in Cherbourg all that afternoon and one might have expected that it would have gone ashore in France. On the other hand, I believe that it stayed on board until we were in Southampton Water. It seems highly significant to me that we docked in Southampton in the small hours of 2nd May and that it was only three days later that Mr. J. T. R. Sharrock had a brief glimpse of the bird which he subsequently identified as a White-throated Sparrow at Needs Oar Point (*Brit. Birds,* 54:

366-367). This place is on the edge of the Solent and the *Queen Elizabeth* must have passed within six miles of it.

In conclusion, you may be interested to know that I saw a Blue Jay (*Cyanocitta cristata*) fly off north from the crow's-nest (*sic*) about twenty-four hours after we left New York. A. L. DURAND

[Mr. Durand's observations certainly suggest that the Hampshire bird was the one he saw on board the *Queen Elizabeth* though it is impossible to be certain, of course. This does not alter the validity of Mr. Sharrock's record, however, because it is now accepted that the possibility of "assisted passage" should not count against occurrences of American Passerines unless there is direct evidence that the individual concerned did not arrive in a completely free state (*Brit. Birds*, 48: 146-147; 53: 40-41; see also *Ibis*, 98: 156-157). In connection with the American Robin also seen by Mr. Durand, it should perhaps be added that there was a report of this species at large in Britain in the spring of 1961, but that was in Orkney .—EDS.]

"Pale but interesting"

Sirs,—Lest the repeated use of the spelling "Palearctic" in *British Birds* should lead to its general adoption, I should like to point out that it was used in a recent article of mine (54: 320) in defiance of my express objection. I. C. T. NISBET

[Standardised spelling is essential for the uniformity of any journal. Both "Palaearctic" and "Palearctic" are currently in wide use and we prefer the greater simplicity of the latter, even though it involves a further departure from the original Greek. If a close precedent be needed, it should be remembered that the science of animal and plant relationships was formerly "oecology".—EDS.]

Request for information

Breeding distribution and habitats of Pied Flycatcher.—In 1952, on behalf of the British Trust for Ornithology, Dr. Bruce Campbell conducted an enquiry into the breeding distribution and habitats of the Pied Flycatcher (*Muscicapa hypoleuca*) in Britain. The results were later published in *Bird Study* (1: 81-101; 2: 24-32, 179-191), in a paper which traced the history of the species since its first record in 1676 and showed that there had been a phase of increase and spread since 1940. In those twelve years seven countries had recorded breeding for the first time and the species had reappeared in ten others after long intervals. This enquiry is to be repeated in 1962, after a decade in which the spread seems to have slowed down. During this time, in fact, a population breeding in nest-boxes in the Forest of Dean has decreased by about 30%. Anyone who is willing to help is asked to write to Dr. Campbell at Hordley, Woodstock, Oxfordshire. Negative information from suitable habitats between the Humber and Bristol Channel is also needed.

Recent reports and news

By I. J. Ferguson-Lees and Kenneth Williamson

[These are largely unchecked reports, not authenticated records]

This summary attempts to review the rarer birds of the autumn against a background of the more striking movements of common species. It covers the three-month period from early August to early November and has had to be divided into two parts. What follows now is largely confined to Passerines and the few additional land birds which one tends to associate with them, except that the American picture is given in full. All other waders, gulls, terns, ducks and so on will be summarised in our next issue.

THE GENERAL PICTURE

The usual autumn pattern includes a steady passage of chats and warblers in August, one or more falls of Scandinavian migrants in September and immigrations of various thrushes in October. In addition, excess populations of species normally regarded as residents lead to random dispersals which sometimes amount to eruptions (or irruptions from the Continent).

This autumn the passage of night migrants in August was generally rather poor and the numbers of **Whitethroats** (*Sylvia communis*) and **Willow Warblers** (*Phylloscopus trochilus*) mostly well below average. At the end of the month, however, and in the first week of September, there was a striking arrival of Scandinavian Passerines, among which **Pied Flycatchers** (*Muscicapa hypoleuca*) were particularly conspicuous. This movement will be properly discussed in *Bird Migration* and it is sufficient to say here that the first Pied Flycatchers arrived on the east coast on 29th August when about 40 were noted at Spurn (Yorkshire). More and more were reported in the next few days until by 2nd and 3rd September these birds were being seen in thirties and forties all down the east coast from Shetland to Kent. From the 29th too, but more particularly from the 31st, there were also a few in the Irish Sea area at such places as Anglesey and Bardsey (Caernarvonshire). Single birds appeared inland in many parts of England at this time, but very few were noted on the south coast until a fortnight later. With the Pied Flycatchers came smaller numbers of **Spotted Flycatchers** (*M. striata*), a lot of **Willow Warblers, Wheatears** (*Oenanthe oenanthe*) and **Whinchats** (*Saxicola rubetra*), and the usual scattering of **Redstarts** (*Phoenicurus phoenicurus*), **Blackcaps** (*S. atricapilla*) and **Garden Warblers** (*S. borin*). A few **Wrynecks** (*Jynx torquilla*), **Red-backed Shrikes** (*Lanius cristatus collurio*), **Ortolan Buntings** (*Emberiza hortulana*) and **Bluethroats** (*Cyanosylvia svecica*) also accompanied them; the last two species will be dealt with in greater detail below. In the last three weeks of September, too, there were several reports of whitish-looking **Treecreepers** (*Certhia familiaris*) on the east coast from Norfolk to Northumberland and Shetland, as well as one or two in the south and west, and these were probably immigrants.

Redwings (*Turdus musicus*) and **Fieldfares** (*T. pilaris*) were both later than usual. Normally the first flocks of Redwings come before the end of September and Fieldfares have usually arrived in bulk by the second week of October. This year there were odd individuals of both species in August, including single Fieldfares at Spurn (Yorkshire) on the 11th and North Coates (Lincolnshire) on the 26th, but there was no real fall of Redwings before 4th October and Fieldfares were little in evidence until three weeks later. Nocturnal movements of Redwings were widely reported on the nights of 12th/13th and 13th/14th October, and there was a big diurnal

passage on the mornings of 18th, 19th and 20th. These were utterly dwarfed, however, by a remarkable influx of both these thrushes, and especially of **Blackbirds** (*T. merula*), on 5th and 6th November. This will also be dealt with more fully in *Bird Migration,* but we cannot refrain from commenting on the thousands (and, in some cases, tens of thousands) of Blackbirds and Fieldfares which appeared at this time in Kent, Essex, Suffolk, Norfolk, Lincolnshire and Yorkshire, with smaller numbers further north at least to Fife. Some slight indication of the size of the Blackbird fall can be got from the fact that on 5th November no less than 647 were trapped and ringed out of an estimated total of at least 8,000 at Spurn (Yorkshire), while 35 miles away at Gibraltar Point (Lincolnshire) 858 were ringed and it was estimated that 100,000 passed over. In Suffolk one farmer described the Blackbirds as being "three to a yard all over the fields". The Fieldfares, however, mostly went on inland: 35,000 arrived at Hunstanton (Norfolk) early on the 5th and similar mass movements were reported on other parts of the coast, but few of these birds came down as the Blackbirds did and there were several observations of flights of a thousand or more in such inland counties as Oxford and even over London. There was also a very big immigration of **Starlings** (*Sturnus vulgaris*) at this time, and quite a large fall of **Woodcock** (*Scolopax rusticola*) from East Anglia to eastern Scotland.

Siskins (*Carduelis spinus*) started to arrive on the east coast in mid-September at the same time as in 1960 when there was a widespread irruption (*Brit. Birds,* 53: 541-542; *Bird Migration,* 2: 13), but the numbers were not large. Many more came in during the first week of October, however, when flocks of up to 200 were seen in Orkney and there were more than anybody living there could remember. Soon afterwards, flocks of 40 or 50 were noted at various places on the east coast and even inland in such counties as Derbyshire. By the third week, they had reached a line from Hertfordshire to Glamorgan. A few **Waxwings** (*Bombycilla garrulus*) also arrived in Orkney and Shetland at the beginning of October and there was evidently quite an influx with the Blackbirds on 5th and 6th November, for we had a sudden spate of reports in east coast counties from Essex to Shetland, including parties of ten to twenty in Essex, Norfolk, Berwick and Roxburgh. In the next fortnight, particularly from the 9th to 19th, there were ones and twos, and odd parties of up to four and six, in such inland counties as Nottingham, Derby, Leicester, Northampton and Cambridge, as well as a few further south in Surrey and Sussex and others to the west in Shropshire, Cheshire, Lancashire and the Isle of Man. It is doubtful, however, if the numbers merit the use of the term "irruption" although it is interesting to note that Waxwings similarly began to arrive in Denmark on the 4th.

From immigrants we turn to eruptions within the British Isles. The unusually high population of **Goldfinches** (*Carduelis carduelis*) was mentioned in our last summary (page 336) and the numbers and sizes of flocks of this species first attracted attention in south-east England and East Anglia in early July. Since August a similar situation has been noted in other southern counties as far west as Cornwall and in several Midland areas as well. **Linnets** (*C. cannabina*) also seem to have been rather more numerous than usual. There has also been evidence of movements of **Bullfinches** (*Pyrrhula pyrrhula*) in the east and south, but it is not yet certain whether these are immigrants or native stock. In this connection, however, it is interesting to note that Bullfinches are now reported as unusually common in Denmark, and birds of the Northern form (*P. p. pyrrhula*) were recorded on Fair Isle in the last ten days of October and the first week of November. **Snow Buntings** (*Plectrophenax nivalis*) are normally confined mainly to the east coast and it is perhaps significant that there have been a number of unusual reports from Leicestershire to Lancashire and Hertfordshire to Herefordshire.

Great Tits (*Parus major*) and **Blue Tits** (*P. caeruleus*) have again shown a widespread autumn dispersal, just as they did in 1959 and have done to a lesser extent each year since the events of 1957 first drew attention to this phenomenon and

spotlighted the present high populations of tits (*Brit. Birds*, 53: 49-77, 99-171 176-192). There has also been some movement of **Coal Tits** (*P. ater*), particularly in parts of Lancashire and Cheshire, the Midlands, East Anglia and the south coast, and we understand that Coal Tits are considerably more numerous than usual in Denmark where an invasion of Blue Tits is also now taking place.

Long-tailed Tits (*Aegithalos caudatus*), which are very much affected by hard winters and were reduced almost to nothing by the great freeze of 1946/47, are again hardly less common than they were in the autumn of 1960 (*Brit. Birds*, 53: 542) and an eruption of **Bearded Tits** (*Panurus biarmicus*) is now taking place for the third year in succession. This is perhaps surprising as reports from East Anglia in August and September suggested that the population was not at as high a level as in 1959 and 1960. Nevertheless, seventeen appeared at Rye Meads (Hertfordshire) on 12th October and there were four others there on the 21st; two were seen at Tring (Hertfordshire) on 1st November and what were presumably the same birds were then variously reported at Wilstone and Marsworth Reservoirs until at least 5th November, when between three and six were located near Oxford and two appeared at Bradwell (Essex). There was also one by Pagham Harbour (Sussex) on 29th October. Autumn departures were again noted at Minsmere (Suffolk) and wanderers were seen at Holme (Norfolk) and Wicken (Cambridgeshire) in October.

Another species which has a comparably local breeding distribution, and which has also been building up steadily since 1947, is the **Dartford Warbler** (*Sylvia undata*). Its numbers are at a similarly high level in some areas and so it is interesting to find that it is also showing signs of a dispersal after the breeding season. Since the second week of October some eight or nine have been recorded at the three most regularly watched points on the south coast. The first was at Selsey Bill (Sussex) on 8th and 9th October, the second and third were a female and a male at Portland (Dorset) on 13th and 14th October respectively, the fourth was also at Portland on 29th and 30th October, and Dungeness (Kent) then had a total of four or five on six dates during 5th-26th November, including three on the 19th.

Perhaps the most unexpected eruptive species this autumn has been the **Dunnock** (*Prunella modularis*), however. Unprecedented numbers appeared at Gibraltar Point (Lincolnshire) in the first three days of September. Soon afterwards, these birds began to be noted in tens and fifties, in places where ones and fives are more usual, on the coasts of Yorkshire, Lincolnshire, Norfolk, Suffolk and Essex. In these areas the numbers were first commented on in mid-September, but it was not until nearly a month later that a similar dispersal of Dunnocks on the coasts of Sussex, Hampshire and Dorset was reported. Since then these rather unobtrusive birds have been sufficiently numerous to attract attention in a few inland counties as well and we await developments with interest. **Jays** (*Garrulus glandarius*) have been reported on the move in the west and south from Pembrokeshire round to Dorset and Sussex, and a marked increase was noted in Herefordshire in October, but the observations are too scattered for one to be able to draw any general picture.

WARBLERS

Warblers have been well represented among the scattering of vagrants. They have included a species new to Britain and Ireland, two others which have been recorded only once, and four more which have been known to occur on less than a dozen previous occasions. Taking the regular species into account, there have been no less than nine *Phylloscopus* and five *Locustella*.

As mentioned last month (page 396), single **Bonelli's Warblers** (*Phylloscopus bonelli*) appeared at Cape Clear (Co. Cork) on 2nd and 3rd September and at Fair Isle (Shetland) on the 22nd; in connection with the former it is interesting to note there was also one on Ushant, France, on 1st September. The only **Arctic Warblers** (*Ph. borealis*) were on the Isle of May (Fife) on 5th and 6th September and on Fair

Isle on the 26th. Fair Isle added another member of the primarily Asiatic genus to its list when the second British **Dusky Warbler** (*Ph. fuscatus*) was trapped there on 14th October. Equally rare and from a similarly distant part of Asia was a **Radde's Bush Warbler** (*Ph. schwarzi*) caught near Blakeney Point (Norfolk) on 3rd October, ringed and released on the 4th and last seen on the 5th. There were six records of **Greenish Warbler** (*Ph. trochiloides*)—on Skokholm (Pembrokeshire) on 30th and 31st August, at Fair Isle on 1st September, at Whitley Bay (Northumberland) on 17th September, at Dungeness (Kent) on 24th September, at Cape Clear on 14th October and at Redcar (Yorkshire) on 20th October. **Yellow-browed Warblers** (*Ph. inornatus*) were less numerous than in the last two autumns and there was no striking peak as in 1960 (*Brit. Birds*, 53: 538). Fourteen records of this species were scattered between 17th September and 14th October. The first, curiously, was on the south coast at Selsey Bill (Sussex) and the second was on the Isle of May eight days later, on the 25th and 26th. There was then one at Dungeness on the 30th, and one at Minsmere (Suffolk) and two at Fair Isle on 2nd October, followed by single birds at Fair Isle on 3rd and 9th-10th October, at Riding Mill (Northumberland) on the 4th and 14th, and at Spurn (Yorkshire) and Cape Clear on the 5th. Finally, there was a little group of records in the west in mid-October, at Malin Head (Co. Donegal) on the 13th, and at Cape Clear again and Skokholm on the 14th. Thus the only *Phylloscopus* on the British list not recorded here this autumn was Pallas's Warbler (*Ph. proregulus*).

On the other hand, the rather confusingly named **Pallas's Grasshopper Warbler** (*Locustella certhiola*) was discovered over here for only the fourth time when one was identified on St. Agnes (Isles of Scilly) on 7th October, at the height of the peak period for eastern species. Two other rare *Locustella* reached Fair Isle—a **River Warbler** (*L. fluviatialis*) on 24th September and a **Lanceolated Warbler** (*L. lanceolata*) from 2nd to 14th October. The River Warbler has not previously been recorded in Britain or Ireland, but the Lanceolated Warbler has now reached Fair Isle on ten occasions and there were two observations there in 1960 (*Brit. Birds*, 54: 142-145).

The **Aquatic Warbler** (*Acrocephalus paludicola*), once regarded as a rare vagrant, kept up its now regular autumn appearance in small numbers. A total of thirteen records, involving fifteen birds, in Norfolk, Kent, Sussex, Berkshire, Hampshire, Dorset, Somerset, Pembrokeshire and Cos. Wexford and Cork between 2nd August and 30th September confirms the essentially south coast picture that we have now come to expect. Two other species whose occurrences are best looked at in summarised form are the **Melodious** and **Icterine Warblers** (*Hippolais polyglotta* and *icterina*). There were 17 reports of Melodious Warblers, involving at least 21 individuals. These followed the usual pattern, rather different from that of the Aquatic Warbler, in that the centre lies in the area between south-west Ireland, the northern part of the Irish Sea and Dorset. Only four of the observations were outside this area and three of those were just further along the south coast, in Sussex (two) and Kent. The remaining record was an unusual inland one, at Rye Meads (Hertfordshire) on 12th and 13th August. The main group of Melodious Warblers this year were in Cos. Cork, Mayo and Wexford, Scilly, Dorset, Somerset, Pembroke and Caernarvon and on a ship between Lancashire and the Isle of Man. All but one were between 12th August and 17th September. Most of the Icterine Warblers were in a similar period from 10th August, but with one or two stragglers as late as 6th October. The distribution of Icterine records was rather puzzling in that there were very few on the east coast where this species is usually most commonly found—only, in fact, a single one in Suffolk, two in Norfolk, one or two in Yorkshire and one in Kent. Indeed, there were more on the south coast, with two in Dorset, one in Sussex, three at Great Saltee (Co. Wexford) and at least three different birds at Cape Clear. One at Great Saltee stayed there off passage from 20th Septem-

ber to 6th October. In all, there were twelve records, involving at least fourteen individuals. For the first time, therefore, Icterines were outnumbered by Melodious Warblers. As usual, however, we also received a number of indeterminate records referring to one or other of these two very similar species. There were at least seven in this category, all in the south—from Sussex and Dorset to Devon, Somerset, the Isles of Scilly and Co. Cork. Another *Hippolais* was an **Olivaceous Warbler** (*H. pallida*) on St. Agnes (Isles of Scilly) on 3rd and 4th October.

One last species which we should mention in this section is the **Barred Warbler** (*Sylvia nisoria*). Many fewer reports reached us than in either of the last two years. In fact, apart from several at Fair Isle there were only a dozen records. These were mostly scattered down the east coast from Shetland to Essex between 31st August and 29th October, but there were three more unusual occurrences in the south-west —on Great Saltee on 31st August, at Cape Clear on 6th and 7th October and on St. Agnes on 8th and 9th October (two birds on the latter day). At Fair Isle, after one from 20th to 27th August, Barred Warblers were seen every day from 4th to 9th September (maximum four on the 4th) and on the 20th and 22nd. There was also one on Ushant, France, on 2nd September.

THRUSHES AND CHATS

Among the Asian vagrants recorded on Fair Isle this autumn was a first-winter female **Dusky Thrush** (*Turdus eunomus*), which stayed from 18th to 21st October and which was caught and ringed on the 19th; there are now only two previous accepted records of this species in Britain. Another great rarity which recently seems to have been turning up every couple of years or so, usually in the winter months, is the **Desert Wheatear** (*Oenanthe deserti*) and one was seen on Farlington Marshes (Hampshire) on 4th and 5th November. Of rather less frequent occurrence in the last decade or two, however, has been the **Alpine Accentor** (*Prunella collaris*) and so it is pleasant to note that one was identified at Pett Level (Sussex) on 12th October.

In 1960 **Bluethroats** (*Cyanosylvia svecica*) were mainly in north-east England and east Scotland, and chiefly in the second half of September (*Brit. Birds*, 53: 539-540). In 1961 there were rather fewer—only about nineteen altogether—and the majority of these coincided with the fall of Scandinavian migrants in late August and early September; the rest were in the first half of October. The first was at Steart (Somerset) on 27th August, followed by one on Great Saltee (Co. Wexford) three days later. One at Foulness (Essex) on 2nd September was a male of the Red-spotted form. There was then a spate of records, with one at Bradwell (Essex) on the 2nd and another there on the 4th, one on the Isle of Sheppey (Kent) on the 3rd, single birds on Fair Isle and St. Mary's Island (Northumberland) on the 4th, and two or three at Blakeney Point (Norfolk) on the 4th and 5th. There was then one on The Skerries (Anglesey) on the 10th, one at Dungeness (Kent) and one at Ditchling Beacon (Sussex) on the 13th, and one at Slapton Ley (Devon)—the first record for the mainland of that county—on the 17th. After a gap, Fair Isle had two or three daily from 4th to 10th October, and there were other late ones at Portland (Dorset) on the 9th and 10th, and on St. Kilda (Outer Hebrides) from the 13th to the 17th.

FLYCATCHERS AND SHRIKES

In 1959, and to a lesser extent in 1960, one of the most surprising features of the autumn was provided by the numbers of **Red-breasted Flycatchers** (*Muscicapa parva*). Twenty years ago there were under a hundred records of this species in Britain and Ireland, but that figure was approached in 1959 alone (*Brit. Birds*, 53: 46-47) and over thirty-five were reported in 1960 (53: 540). We have probably not yet received all the 1961 observations, but already the total stands at about forty individuals. The earliest of these extend as far back as August when there were

single ones at Craster (Northumberland) on the 15th, Baltimore (Co. Cork) on the 27th and Skokholm (Pembrokeshire) on the 28th. Apart from three records in the first ten days of September, there were then no others until a small influx during 18th-25th September, which was followed by a larger fall in the first fortnight of October. Two of the three early September records were from the south coast—two at Portland (Dorset) on the 8th and one at Gilkicker (Hampshire) on the 9th—and the third was at Spurn (Yorkshire) on the 4th. During 18th-25th September Red-breasted Flycatchers were noted in Shetland, Aberdeenshire, Northumberland, Co. Durham, Yorkshire, Norfolk and Co. Cork, and there was a similar distribution during the later influx in the first half of October when these birds appeared in Shetland, Orkney, Northumberland, Co. Durham, Yorkshire, Lincolnshire, Essex, Dorset, Pembrokeshire, Scilly and Cos. Wexford, Cork and Donegal. The biggest numbers at this time were at Spurn where there were four on 7th October, and on St. Agnes where there were five on the 5th. A good many of them were identified as immatures. It is also interesting to note that one flew aboard a trawler off north-east Iceland on 3rd October.

An interesting shrike record involved a first-winter bird of the *isabellinus* group of **Red-tailed Shrikes** (*Lanius cristatus*) which stayed at Walcott (Norfolk) from 10th to 14th September and was trapped and ringed (discussions of this group were made in *Brit. Birds*, 53: 427; and 54: 209-210). A number of **Red-backed Shrikes** (*L. cristatus collurio*) occurred at this time on the east and south coasts from Shetland round to Cornwall and Scilly, and were probably part of the September influx rather than British breeding stock; a late male was seen at Whitley (Northumberland) on 10th October. At Bamburgh (Northumberland) several observers identified a **Masked Shrike** (*L. nubicus*) on 22nd October. Most surprising was the lack of **Woodchats** (*L. senator*) which in recent years we have come to expect in small numbers every autumn. Indeed, only one has been reported so far—a first-winter bird on Great Saltee (Co. Wexford) on 28th August. **Lesser Grey Shrikes** (*L. minor*), on the other hand, which have been well represented this year, continued to show up in September: there was one at Shotton Pools (Flintshire) on 21st and 22nd September and another on Lundy (Devon) on the 24th, as well as one on Ushant, France, on the 25th. To the earlier observations already given in previous summaries (*Brit. Birds*, 54: 295-296 and 335) we might add an adult which was seen at Barr (Ayrshire) from 15th to 24th June.

FINCHES AND BUNTINGS

Crossbills (*Loxia curvirostra*) have shown no signs of irruption this year, but one or two parties seen on the east coast in August may have come across from Scandinavia and the suggestion of immigration is perhaps supported by the identification of a **Two-barred Crossbill** (*L. leucoptera*) at Bucklebury (Berkshire) on 25th August. Four **Arctic Redpolls** (*Carduelis hornemanni*) arrived on Fair Isle on 19th October and two were ringed. **Serins** (*Serinus canarius*) continue to be reported: there was a male at Farlington Marshes (Hampshire) on 4th November, and two at Dungeness (Kent) a week later. In Britain, **Scarlet Grosbeaks** (*Carpodacus erythrinus*) appeared only in Shetland where there were three at Fair Isle on 4th September and singles from then until the 11th, when one appeared for two days on Foula; Fair Isle also had a late bird from 6th to 8th October. It is interesting to note, however, that one occurred on Ushant on 29th September.

The last three days of August and the first twenty of September—the time of drift from Scandinavia—saw a number of records of **Ortolans** (*Emberiza hortulana*). These were mainly in east coast counties from Shetland to Northumberland, Yorkshire, Norfolk, Suffolk and Kent, but others were seen in Sussex, Dorset, Somerset, Devon, Cornwall, Anglesey and Cos. Wexford, Cork and Mayo; in fact, there were as many as five on Lundy during 9th-12th September. Outside this three-week

period there were only a few reports from Fair Isle, Portland and Great Saltee in the first week of October and two rather later observations at Needs Oar Point (Hampshire) on 15th October and Sandwich Bay (Kent) on 5th November.

Of the rarer buntings, **Little Buntings** (*E. pusilla*) are almost regular on Fair Isle in autumn and the species was recorded there this year on eight days in September and ten in October; there were two birds on 1st October. Otherwise the only Little Buntings identified were on The Skerries (Anglesey) on 25th September, at Spalding (Lincolnshire) on 1st October and on Tory Island (Co. Donegal) on 7th October. There were a surprising number of **Yellow-breasted Buntings** (*E. aureola*), considering that there are only a dozen previous records of this species in Britain and Ireland. One was seen between Zennor and St. Ives (Cornwall) on 17th September, there was a second on the Isle of May (Fife) on 7th October and then a third and fourth on Cape Clear (Co. Cork) on 11th October. There was also the usual scattering of **Red-headed Buntings** (*E. bruniceps*) of dubious origin. These included one on Foula (Shetland) from 6th to 22nd August, one on Lundy (Devon) during August, one at Beachy Head (Sussex) from 11th to 16th September, one on Skokholm (Pembrokeshire) from 19th to 25th September, and one at Knaresborough (Yorkshire) on 20th September and again a month later.

PIPITS AND WAGTAILS

At least seven **Richard's Pipits** (*Anthus novaeseelandiae*) were reported between early September and mid-November, five of them on the east coast and two in the south-west. The first was at Blakeney Point (Norfolk) on 5th September and Spurn (Yorkshire) had two of the others, one passing south on 11th September and one which stayed from 21st October to 4th November. The others were at Fair Isle on 8th and 18th October, at Cape Clear (Co. Cork) on 13th October and on Braunton Marshes (Devon) on 12th November. **Red-throated Pipits** (*A. cervinus*) were seen on Great Saltee (Co. Wexford) on 28th August and St. Kilda (Outer Hebrides) from 7th to 10th October, the former being trapped and ringed. There were also eight or more records of **Tawny Pipits** (*A. campestris*) in September and the first half of October. The first was at Dungeness (Kent) on 1st and 2nd September, followed by another on the 16th; two appeared at Gilkicker Point (Hampshire) on 5th September; there was one at Portland (Dorset) on 17th September and then simultaneous appearances at Langney Point (Sussex) and Skokholm (Pembrokeshire) on the 19th, followed by one by the Hayle Estuary (Cornwall) four days later; finally, St. Agnes (Isles of Scilly) and Cape Clear (Co. Cork) produced single birds on 10th and 12th October respectively.

A first-winter **Yellow-headed Wagtail** (*Motacilla citreola*) stayed on Fair Isle from 4th to 13th September, the fourth to be recorded there since 1954. There are no other British records of this species (*Brit. Birds*, 48: 26-29).

OTHER SPECIES

A juvenile **Rose-coloured Starling** (*Sturnus roseus*) was seen on Cape Clear (Co. Cork) on 31st August and 2nd to 8th September, and another stayed on Fair Isle from 1st to 14th September. The latter was trapped and ringed. Two adult Rose-coloured Starlings were also reported during the autumn, at Tewkesbury (Gloucestershire) on 17th July and Southminster (Essex) from at least 8th to 18th October but these are both thought likely to have been escapes from captivity.

Alpine Swifts (*Apus melba*) appeared at Llanrhian (Pembrokeshire) on 29th August and at Cliffe (Kent) on 7th October. A **Red-rumped Swallow** (*Hirundo daurica*) was identified at Bucklebury (Berkshire) on 31st August. Among records of **Golden Orioles** (*Oriolus oriolus*) was a first-winter female ringed on Bardsey (Caernarvonshire) on 19th September.

It was generally rather a poor autumn for **Hoopoes** (*Upupa epops*) with only odd ones on the south coast from August to October, but also one at Spurn (Yorkshire)

from 9th to 15th August, one at Skokholm on 18th September and one near Holyhead (Anglesey) on 21st October.

AMERICAN VAGRANTS

Two American Passerines of no little interest occurred in Europe in the second week of October and, as it would be illogical to separate these from the other New World vagrants, this section is not confined solely to small land birds. The most commonly recorded American species was, as usual, the **Pectoral Sandpiper** (*Calidris melanotos*). In fact there were at least 21 records of Pectoral Sandpipers, involving some 26 or 27 individuals. Five of these birds were in August, seventeen or eighteen in September and four in October. After one at Stoke (Kent) on 12th August, no more were reported until the very end of the month, but there were then simultaneous appearances on the 31st of single ones on Tresco (Isles of Scilly) and Lundy (Devon) and of two on Foula (Shetland). The bulk of the records came in the fortnight from 3rd to 17th September. During this time the species was reported in Cos. Down, Belfast and Antrim, Anglesey, Flint, Scilly, Cornwall, Hampshire Kent, Norfolk, Co. Durham and Shetland. No less than three of the records involved two birds and one three. Several stayed for varying periods up to thirteen days and one remained in the same place for over three weeks; two or three were trapped and ringed. No new arrivals were reported between 17th September and 5th October, except one at Lincoln from 30th September onwards, but there were then three or four which formed an interesting background to other American species (see below). One was seen on St. Agnes (Isles of Scilly) on 5th October, and probably another on the 9th; meanwhile there was one near Southampton (Hampshire) on the 6th and 7th and one at Langtoft (Northamptonshire) on the 8th.

Other American waders were rather poorly represented. A **Lesser Yellowlegs** (*Tringa flavipes*) was identified on the River Amble (Cornwall) on 18th September and the only other was on Skokholm (Pembrokeshire) on 9th and 10th October. Single **Buff-breasted Sandpipers** (*Tryngites subruficollis*) were at Lough Beg (Co. Antrim) in mid-August (this one stayed for ten days), at Minsmere (Suffolk) on 1st September and near Slimbridge (Gloucestershire) on 17th September; and **Baird's Sandpipers** (*Calidris bairdii*) at Wyboston (Bedfordshire) from 13th to 24th September and at Tyninghame (East Lothian) on 1st October. A **Wilson's Phalarope** (*Phalaropus tricolor*) at Lady's Island Lake (Co. Wexford) on 12th and 13th August was the third of this species in Britain and Ireland this year (*Brit. Birds*, 54: 295, 333), and the wader list was completed by a **dowitcher** (*Limnodromus* sp.) at Grove Ferry (Kent) from 29th October until at least late November.

Of American ducks and gulls there were only six records. These included male **Surf Scoters** (*Melanitta perspicillata*) at Spurn (Yorkshire) on 30th August and at Portland (Dorset) a month later, and drake **Green-winged Teal** (*Anas crecca carolinensis*) at Gladhouse Reservoir (Midlothian) at the end of October and at Hilfield Park Reservoir (Hertfordshire) on 11th November. An immature male **American Wigeon** (*Anas americana*) was seen on the Isle of Sheppey (Kent) on 28th October and there was a first-winter **Bonaparte's Gull** (*Larus philadelphia*) at Sidmouth (Devon) on the 30th.

We have left until last the two Passerines which prompted this section. A **Gray-cheeked Thrush** (*Hylocichla minima*), of which there are only two previous British records, was trapped on Bardsey (Caernarvonshire) on 10th October, and the same day an **American Redstart** (*Setophaga ruticilla*) died on Ushant, France. The latter was the first record for Europe and brought to seven the total of species of American wood warblers known to have occurred this side of the Atlantic (*Brit. Birds*, 53: 575). The fact that these two birds appeared simultaneously nearly three hundred miles apart, at a period when there was a little spate of Pectoral Sandpipers and a Lesser Yellowlegs, suggests a common weather factor.

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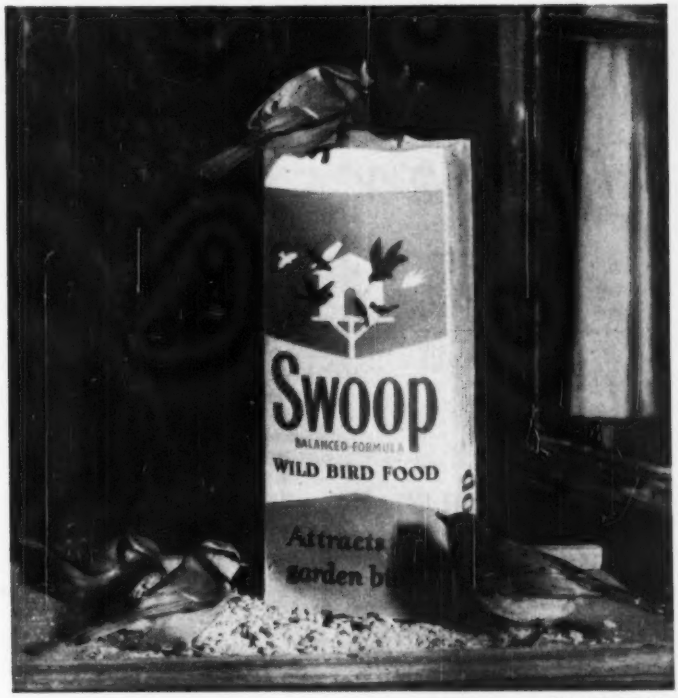

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